CURRENT PRICES OF ENGINEERING MATERIALS

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PRICE CHANGES AND THE BUSINESS OUTLOOK.

The iron and steel markets have been quiet. Foundry pig iron is 50 cts. a ton cheaper, but steel-making irons are in active demand at the old prices. The iron ore prices have been settled for this year on a higher basis than ever before. Wire products have advanced $2 per ton and structural rivets are likewise up $2.

In the metal trades a wild speculation in the tin market carried prices to a new high level, but at least half of the advance has been lost since the new year opened. Copper is moving more freely at approximately ⅛-ct. per lb. higher. Lead had a sharp advance of $6 per ton.

Southern mills have made a uniform advance of $2 to $4 a thousand on cypress lumber. Hard woods are in better demand and the market is exceptionally firm. The price has advanced slightly. In the paint trade white lead in oil is up ½-ct. and linseed oil is 5 cts. a gallon higher. The last advance puts it to a higher level than before in years.

A furious speculative movement in cotton carried the price to unusual figures. This is having its effect on finished products such as belting, waste, and cement bags.

The Department of Agriculture computed the farm value of the five principal cereal crops, on Dec. 1, 1909, as $2,900,000,000. This is the highest figure ever recorded. In cotton, too, the planter has reaped more benefit from the high figure than any time since the resumption of specie payments. The value, to the planter, of this year's cotton crop will be not less than $700,000,000. The January dividend disbursements were the largest on record, amounting to $202,000,000. Money is quoted at higher figures, which is another indication of industrial expansion.

Labor is unusually restless. Early in December the switchmen in the Northwest went on a strike and there were numerous demands for increased wages in the steel mills. In fact, requests and demands for increased compensation have been of almost daily occurrence. Steam fitters in New York struck for a 10% increase this last week, thus violating the Building Trades agreement.

No ordinary unrest is this, for the plea is that the increased cost of living makes higher compensation necessary. In this they have a champion in no less a personage than the President of the United States. Strikes in midwinter are not a frequent occurrence.

Among the important new work projected or under way is the Quebec bridge, which will call for about 60,000 tons of structural shapes. The contract for the foundations has been let at a cost of $1,500,000. The U. S. Steel Corporation is planning to spend about $100,000,000 for new plants at the head of Lake Michigan. The same company will make important additions, through subsidiary concerns, to plants in the South.

The Chicago, Milwaukee & St. Paul R. R. will start the construction of about 150 miles of new line. The Chicago & Northwestern R. R. is planning to build 125 miles; the beginning of an extension to the coast.

A new hotel and exhibition hall is planned for Chicago that will involve an outlay of $9,000,000. Work has been started on the Whitehall Building extension in New York.

LABOR.

High-class labor is in excellent demand. In practically every line of skilled work there is a crying call for workers. Laborers for outside work are in good demand in spite of a heavy snow and freezing weather in New York. The employment agencies have few men of this character, but for such as are sent out the following wages prevail: Laborers, general excavating, dry clean surface work, $1.50 to $1.75 per day; wet or rough work, $1.75 to $1.85, tunnel workers $2 to $2.10. Practically all the experienced tunnel workers can secure employment on the Ashokan contracts. Good foremen command $2.25 to $2.75 per day, lumbermen can easily obtain $26 to $30 per month and keep.

In the skilled trades, grinders, lathe hands and milling machine men are hard to obtain. Wood workers skilled in the use of machine tools command $2.50 to $3 and are in especially good demand in the South. Iron molders are likewise scarce and $3 is paid for good hands, while experienced piece workers can make from $4 to $6. Pavers in Newark, N. J., are getting 65 cts. an hour.

The total arrivals of immigrant passengers at the port of New York during 1909 was 921,257, an increase, compared with the previous year, of 520,000.

CEMENT, LIME AND BRICK.

PORTLAND CEMENT.—The market is lifeless. In New York harbor practically all the lighters are tied up and no deliveries are being made. Some little business is ruling outside the city, but this is only for an occasional carload. Prices, however, are unchanged from our last report. For delivery within lighterage limits in New York City, $1.43 per bbl. is asked; in Philadelphia the price is $1.42; in Boston, $1.52. Some manufacturers are willing to make long time contracts and some bidders on the Erie Canal work have agreed to maintain the price for the "life of the contract." This would be about two years. The largest work in sight is that of the Brooklyn Subway, which will involve half a million barrels. The year 1909 was an improvement over the previous one, but the production last year was not equal to that of two years ago. One company, in its annual report to the stockholders, stated the situation as follows: "The present year has been the worst ever known in the cement industry. The mills of the country have been run to about 60% of their capacity, and the production has been marketed at the lowest prices ever known—in many cases, at or below cost."

Imported cement is unchanged in price, Alsen's being quoted at $2.40 and Dyckerhoff's at $2.43.

A correspondent in Buffalo quotes Portland cement delivered in that city $1.60 per bbl.; in Los Angeles, Cal., it sold at $2 per bbl.

NATURAL CEMENT.—The trade is just as dull as in the Portland line. The nominal price continues 80 cts. per bbl. delivered within lighterage limits New York City.

LIME.—Quotations are steady and for 500-bbl. lots New York City the following prices prevail: State common, per bbl., 75 cts.; Rockland-Rockport common, 92 cts.; Rockland-Rockport special, 320 lbs., $1.37; select finish, 350-lb., net, $1.60; New Milford, $1.30; hydrated, per ton, $9.

BRICK.—Prices are slightly higher than a month ago, but since the last report, in this paper, they have sold as low as $5.25. The cold weather has had a neutral effect, it has retarded shipping, navigation on the upper Hudson closed Dec. 11, and the builders are not laying brick. Prices today, for Hudson River common brick delivered alongside of dock, are $5.75 to $6 per M.

The brick makers in and about Trenton advanced prices $1 per M. Dec. 18. They are quoting salmon at $7; rough hard at $8, and straight hard at $9 per M.

Seconds and hard brick are $4 to $4.50 per M.

White enameled brick can be had at $60 per M. for the American size and $80 per M. for the English size. This price is delivered at the work in New York City or f. o. b. cars in the Eastern and Middle States.

BRICK PRODUCTION.—The United States in 1908 turned out $108,062,207 worth of brick and tile manufactures. Every State and Territory in the Union contributed to the totals, but Ohio led all others with products valued at $15,915,703 for the year.

Under the general classification by the Geological Survey, virtually everything in clays except the distinct potteries is included—common brick, vitrified brick, sewer pipe, architectural terra cotta, fireproofing, hollow building tile, stove linings, and all classes of drainage tile.

Of all these manufactures of the year the common brick leads in total value, estimated at $44,765,614, or fully 43.13% of the total production. But it required 7,811,046,000 of these common brick to foot the total. For these brick, too, the price at the kiln slumped from $6 a thousand in 1907 to $5.73 in 1908. Of these common brick Illinois produced the largest number, shown to be 1,119,224,000, at $4.32 a thousand at the kilns.

Those two varieties of clay products which showed increases in 1908 were vitrified brick for paving and the common drain tile of the country. The vitrified paving brick produced showed an increase of 101,877,000, with a decrease in value from $11.02 to $10.90 a thousand. At $9.86 a thousand Ohio led in this production, with a value of $3,232,835—one-third of the product of the whole country. Drain tile increased in production almost 30% value at $8,661,476 for the year.

The brick industry of the country in 1908 suffered a decrease of almost 16%, compared with the preceding year.

CRUSHED STONE, SAND AND GRAVEL.

CRUSHED STONE.—The demand continues good in spite of freezing weather. Several large contracts have come out in the past month which will call for an unusual quantity of stone to be used next year and this is keeping the price firm. For stone delivered alongside of dock in full cargo lots of approximately 500 yds., prices are unchanged at 85 cts. for screenings, 90 cts. for 1½-in. stone and $1.05 per cu. yd. for ¾-in. stone. These prices are for trap rock. Limestone can usually be had at about 5 cts. a yd. cheaper.

A New England correspondent sent us the following figures for 2-in. stone delivered on cars at the following named points: Springfield and Holyoke, 90 cts., New Hampton $1, Worcester and Pittsfield $1.10, South Birmingham and Botson, $1.25. These quotations are for net tons.

A Buffalo correspondent quotes broken stone at crusher, in that city, at 65 cts. per cu. yd.

SAND.—The demand for sand is very good. Clean sand is obtainable at 30 cts. and Cow Bay at 35 cts. per cu. yd. delivered alongside of dock. White quartz sand is quoted at 58 to 62 cts. per cu. yd. and white quartz grit at 60 to 70 cts. per cu. yd.

GRAVEL.—Prices are steady and the demand is unusually good considering the winter. Washed gravel is unchanged in price at 65 to 75 cts. per cu. yd. alongside dock New York City. These prices are for cargo lots of from 400 to 600 cu. yds. Pebbles, or roofing gravel, is sold at $1.25 per net ton. White quartz roofing gravel is $1.25 to $1.35 per net ton.

In Buffalo gravel is quoted at 65 cts. a yd. in the pit.

STONE.

HUDSON RIVER BLUE.—Considerable blue stone is coming into this market by rail, navigation having closed. The yards have no surplus, although it is practically impossible to do any outside work. Prices are unchanged from last month and for stone delivered alongside of dock, New York City, or f. o. b. cars, the following figures are named: Flagging, 6 cts. per sq. ft. per in. of thickness, flagging 3-in. thick that will pass New York specifications is 18 to 19 cts. per sq. ft., but some 3-in. stone is sold at 17 cts. Wherever 2-in. stone will answer it can be had at 12 cts. New York with freight added to destination.

Sewer bottoms 5 ft. sq. and 3-in. thick are $6 to $6.50 each. Curbing 5 × 16 in. is 35 cts. and 5 × 20 in. is 47 cts. per lin. ft. Belgian bridge, 6 × 24 in. × 5 in. thick is 60 cts. and 6 in. thick is 72 cts. per lin. ft.

Promiscuous shapes of building and foundation stone sell at 70 cts. and 74 cts. per cu. ft. dressed stone is 82 cts. to 86 cts per cu. ft.

GRANITE.—Prices are practically unchanged from a month ago. For rough block 40 cts. per cu. ft. is asked. This is for Maine granite. Dressed granite is from 80 cts. to $1 per cu. ft. according to the nature of the cutting.

IRON AND STEEL.

PIG IRON.—Prices eased off as the month opened and quotations are about 50 cts. a ton lower than a month ago. Buying by consumers has been small, still so much iron is being shipped on old contracts that the furnaces are very busy.

Toward the end of December business improved, and there was considerable inquiry for iron for forward shipment. Some contracts were placed for delivery as far away as August.

An advance of 50 cts. a ton has been established on non-Bessemer as well as Bessemer ores. There was some expectation that producers of foundry and basic irons might get off with less than the Bessemer advance, and that the reduction in the iron ore tariff might be influential, as well as the competition of Southern iron, which Northern buyers of non-Bessemer ores must meet.

The establishment of ore prices that will affect ore charged into blast furnaces 16 to 18 months hence represents a remarkable confidence in the continuance of prosperous conditions.

Production of all kinds of pig iron in December was at the rate of 31,000,000 tons a year.

The following quotations are for lots of 100 gross tons and over f. o. b., cars at the points named: Foundry iron in Cincinnati, southern No. 1, $18; southern No. 2, $17.50; southern No. 4, $16.75. In Philadelphia, northern foundry No. 2 is sold at $19. In New York City northern foundry No. 2 is held at $18.50 to $18.75. In Chicago northern foundry No. 2 is sold at $19 to $19.50; southern No. 2 at $18.50. In Pittsburg Bessemer is sold at $20 and basic at $18. No. 2 in Birmingham is $14.

STRUCTURAL SHAPES.—The business transacted in the last six months has been tremendous. The rolling mills are clogged with orders and it is difficult to secure material in any reasonable time. It is considered fortunate that some new business has been held up, for, had it come out, the mills would have been in worse shape than ever. So urgent is the demand that some consumers are buying from warehouse, at a much higher figure.

New work, either contemplated or under way, includes 60,000 tons for the Quebec bridge, 20,000 tons for the municipal building, New York, a factory in New York, 3,500 tons; a highway bridge in Newark, N. J., 1,800 tons; a bridge at Parkersburg, W. Va., 3,000 tons; a factory at Middletown, Ohio, 4,500 tons. The American Bridge Co. closed contracts for over 50,000 tons of fabricated material in December.

The Lackawawanna Steel Co. will supply about 12,000 tons required in the extension of the Whitehall Building, New York.

Pacific Coast business is very quiet, and, in spite of the allowances made by rolling mills in the East, most of the new business is being taken by English and German mills. The idea is advanced that the low price at which some fabricated work is taken leads to the belief that the base price of shapes is shaded to obtain a particularly desirable order.

The following prices are quoted in cts. per lb., f. o. b. Pittsburg: I-beams and channels, 3 to 15-in., 1.55; over 15-in., 1.65; H-beams, over 8-in., 1.75; angles, 3 to 6-in., 1.60; over 6-in., 1.65; zees, over 3-in., 1.60; deck beams and bulb angles, 1.80; hand rail tees, 2.80.

Chicago store prices are as follows in cts. per lb.: Angles 3 to 6-in., 2 to 2.10; over 6-in., 2.10 to 2.20; beams and channels, 2 base.

RAILS.—Business has been especially good, although, in the last fortnight, few new orders have been booked.

It is estimated that, already, orders for 1910 delivery amount to 1,750,000 tons. Recently a Vanderbilt road has purchased 6,500 tons and it is reported that the Baltimore & Ohio is in the market for 70,000 tons. The Harriman lines placed orders for 25,000 tons more last month.

In light rails, under 30-lb., American makers are not able to compete with foreign rollers. This is particularly true for seaboard deliveries and the difference is sometimes as high as $3 a ton.

Small lots, carloads, are 50 cts. a ton higher than the following prices, which are for 500-ton lots and over f. o. b. Pittsburg: Standard sections, 50 to 100-lb., $28; 40 and 45-lb., $27; 30 and 35-lb. $27.50 to $28.50; 20 and 25-lb., $27.75 to $28.25; 12 and 14-lb., $29; 8 and 10-lb., $32. Relaying rails can be had at $22 to $26, according to delivery and quality.

TRACK SUPPLIES.—New business has been light, although the N. Y. C. & H. R. R. R. has made inquiries for a large tonnage. Standard sizes of railroad spikes, 4½ × ⅝ in. and larger, are quoted at $1.80 to $1.85 for first quarter. Boat spikes are firm, at $1.80, base, and small railroad spikes at $1.80, base. These prices are for carload and larger lots, 10c. per keg advance being charged for small lots. Track bolts with square nuts are held at 2.30 to 2.50 cts. per lb., in car lots, in Chicago and Pittsburg. For angle bars $1.50 to $1.55 cts. a lb. is asked.

PLATES.—An overwhelming demand for plates confronts the mills. The buyer who wants a large tonnage is unable to make much impression in the market, a large order being more difficult to place than a small one. The difficulty in getting satisfactory deliveries will probably continue several months, until the large plate mills at the Gary Works are ready for operation. The leading mills have their order books filled for the next six months and deliveries are from eight to ten weeks delayed. The car business is enormous and likewise the boat builders are very active.

Prices are unchanged and for mill shipments are quoted as follows per lb.: ⅜-in. thick up to 100 in. wide, 1.55 to 1.60 cts.; ¼ to ⅜ in., 1.65 to 1.70 cts. Under ¼ in. and heavier than No. 8 gauge, 1.70 to 1.75 cts. No. 8 and No. 9, 1.80 to 1.85 cts. Store prices in Chicago are 2 cts., base.

STEEL CASTINGS.—The price is largely determined by the size of the order and the pattern. Open hearth castings weighing from 100 to 500 lbs. are obtainable at 3.6 to 5 cts. per lb. For crucible castings weighing within the above limits, 7¾ to 9 cts. per lb. is asked.

GREY IRON CASTINGS.—Simple castings, such as manhole covers, etc., are quoted at 1.50 to 2 cts. per lb. Intricate patterns, but heavy, can be had at 2 to 2.5 cts. per lb.

PILING, SHEET STEEL.—The price is very firm, but it is easier to obtain this material than standard structural shapes. No especially large contracts have been booked recently, but several fair-sized orders have been taken. Prices are unchanged at 1.60 to 1.70 cts. per lb. f. o. b. Pittsburg. For an especially large order these figures might be slightly shaded.

FREIGHT RATES.—The freight rates on finished steel products, including plates, structural shapes, merchant steel and iron bars, pipe, fittings, plain and galvanized wire, nails, rivets, spikes and bolts (in kegs), black sheets (except planished), chain, etc., are as follows, in cts. per 100 lbs.: Albany, 16; Buffalo, 11; Boston, 18; Baltimore, 14½; Canandaigua, 13½; Cleveland, 10; Columbus, 12; Cincinnati, 15; Chicago, 18; Harrisburg, 14½; Louisville, 18; New York, 16; Norfolk, 20; Philadelphia, 15; Rochester, 11½; Richmond, 20; Scranton, 15; St. Louis, 23; Washington, 14½.

WIRE ROPE.—Prices are unchanged. The discounts to the larger consumers are 42½% and 2½% discount from list for galvanized and 50% and 2½% for plain. The net prices of galvanized are as follows:

Diameter in inches.	Cts., per ft.—7 Wires to Strand.	12 Wires to Strand.
½	3.4	4.
⅝	4.5	5.1
¾	5.1	5.5
⅞	6.75	7.3
1	7.75	8.8
1¼	13.5	14.
1⅜	15.2	16.2
1½	20.	21.
1⅝	21.5	22.5
1¾	25.	26.

CAST IRON PIPE.—Business in sight includes 4,000 tons of water pipe for Dallas, Tex., and 2,000 to 3,000 tons of water pipe for Fort Worth, Tex. There are also contracts for lots of 500 to 1,000 tons to be required by municipalities in Texas and Arkansas, all of which will be placed within 60 or 90 days. There is no accumulation on yards of any Southern concern, and as a whole the market is in a satisfactory condition. A Brooklyn, N. Y., contract was held up last week owing to threats of an injunction.

Prices of water pipe are unchanged from last months as follows per net ton f. o. b. cars at foundry: Birmingham, Ala., 4 to 6-in., $26; 8 to 12-in., $25; over 12-in., $24. In Chicago, 4-in., $28.50; 6 to 12-in., $27.50; 16-in. and larger, $26.50. In New York, 6-in. is quoted at $26. Gas pipe is held $1 per ton higher in all markets. Specials are held at $50 to $60 per net ton.

RIVETS.—At a meeting of rivet makers held in New York City, an advance of $2 a ton on structural and boiler rivets was made. The demand is referred to as being especially heavy and consumers are specifying freely on their orders. Prices are quoted as follows f. o. b. mill: Structural rivets, ¾ in. and larger, 2.15 cts., base; cone head boiler rivets, ¾-in. and larger 2.25 cts., base; ⅝-in. and 11-16-in. take an advance of 15 cts., and ½-in. and 9-16. in. take an advance of 50 cts.; in lengths shorter than 1-in., also take an advance of 50c. The above prices are absolutely minimum on contracts for large lots, makers charging the usual advances of $2 to $3 a ton to the small trade.

ROOFING, CORRUGATED.—Prices were advanced about $2 per ton last month, and are as follows for 100 sq. ft. of roof surface: Carloads, Pittsburg, No. 28 painted, $1.70; No. 20 galvanized, $3. From store, New York, No. 24, painted, $3.85; galvanized, $4.80; No. 26, painted, $2.95; galvanized, $4.00; No. 28, painted, $2.60; galvanized, $3.75.

SHEETS.—The demand for sheets is very large, but the pressure has let up somewhat in the last two weeks. Shipments from the mills are from 6 to 8 weeks behind. Mill prices for carload lots, are as follows:

	Cts. per lb.—Black.	Galvanized.
Nos. 3 to 8	1.70	....
Nos. 9 and 10	1.75	....
Nos. 11 and 12	1.80	....
Nos. 13 and 14	1.85	2.50
Nos. 15 and 16	1.95	2.60
Nos. 17 to 21	2.25	2.75
Nos. 22 to 24	2.30	2.60

Store prices Chicago are as follows:

	Cts. per lb.—Black.	Galvanized.
No. 10	2.30	} 3.25
No. 12	2.35	
No. 14	2.40	
No. 16	2.50	3.35
Nos. 18 and 20	2.85	3.40
Nos. 22 and 24	2.90	3.55
No. 26	2.95	3.70
No. 27	3.00	3.95
No. 28	3.10	4.15
No. 30	3.30	4.55

NAILS.—Wire nails are very firm and an advance may be expected at any time. Wire and cut nails in carload lots at mill are $2 per keg, base. Store prices in New York are $2.10 for wire nails and $2.05 for cut nails.

FENCE WIRE.—Prices were advanced Dec. 11. For large lots, carload and over, the following prices are quoted f. o. b. Pittsburg:

	Annealed.	Galvanized.
Nos. 9 to 9	$1.80	$2.10
No. 10	1.85	2.15
No. 11	1.90	2.20
No. 12	1.95	2.25
No. 13	2.05	2.35
No. 14	2.15	2.45
No. 15	2.25	2.85
No. 16	2.35	2.95

MERCHANT PIPE.—Some very good contracts have been taken during the month for oil pipe lines. More work of this character is in sight. Indications are that several long lines will be put through early this year. A slight revision in prices and change in the list was made the first of the year by the leading interest, but in general, large lots from mills in the Pittsburg District can be had at a discount from list 79% on black and 69% on galvanized. The following net prices are figured at these discounts from the old list:

	Steel Pipe in Cts. per ft., f. o. b. Mill.—Black.	Galvanized.
1-inch	3.46	5.11
1¼-inch	4.72	6.98
1½-inch	5.67	8.37
2-inch	7.56	11.16
2½-inch	12.07	17.83
3-inch	15.85	23.40
4-inch	22.78	33.48
5-inch	30.55	44.95
6-inch	39.48	58.28
7-inch	61.10	90.36
8-inch	73.32	115.62
9-inch	88.40	139.40
10-inch	110.50	174.25
11-inch	123.50	194.75
12-inch	135.20	213.20

LAG SCREWS.—The price of lag and coach screws is unchanged from last month. They sold at a discount of 75% and 10% from list. Net prices are as follows:

	Price per 100—½-inch.	¾-inch.	1-inch.
3½-inch	$1.17	$2.40	$5.00
4-inch	1.25	2.55	5.25
4½-inch	1.33	2.70	5.50
5-inch	1.40	2.85	5.80
6-inch	1.58	3.20	6.40
7-inch	1.75	3.50	7.00
8-inch	1.82	3.85	7.60
9-inch	2.05	4.10	8.20
10-inch	2.25	4.45	8.75
11-inch	2.40	4.70	9.30
12-inch	2.60	5.00	9.90

BOLTS.—The price of common carriage bolts to the retail trade and larger consumers is 70% and 7½% discount from list on bolts ⅜ × 6 ins., and smaller. The lowest price is 62½% and 5% discount for larger and longer bolts. Net prices are as follows:

Length in inches.	Diameter in inches—Net price per 100—½	⅝	¾
4	$0.74	$1.22	$2.86
5	0.83	1.36	3.15
6	0.92	1.52	3.50
7	1.22	1.65	3.75
8	1.34	1.80	4.25
9	1.45	1.95	4.50
10	1.55	2.20	4.75
12	1.75	2.40	5.25
14	1.90	2.70	5.90
15	2.05	2.85	6.25
18	2.40	3.25	7.20
20	2.60	3.50	7.75

BAR IRON AND STEEL.—An excellent demand is noted for the smaller sizes of iron and steel. The following prices are for small lots from store New York City:

	Cts. per lb.
Refined iron:	
1 to 1¾in. round and square	2.00
1½ to 4 in. × ⅜ to 1 in.	2.20
1½ to 4in. × ¼ to 5-16	2.20
Rods—⅜ and 11-16 round and square	2.20
Angles:	
3 in. × ¼ in. and larger	2.25
3 in. × 3-16 in. and ⅛ in.	2.50
1½ to 2½ in. × ¼ in.	2.25
1½ to 2⅜ in. × 3-16 in. and thicker	2.25
1 to 1¼ in. × 3-16 in.	2.35
1 to 1¼ × ⅛ in.	2.45
⅞ × ¼ in.	2.55
¾ × ¼ in.	2.65
⅝ × ¼ in.	3.70
½ × 3-32 in.	4.50
Tees:	
1 in.	2.80
1¼ in.	2.60
1½ × 2½ × ¼ in.	2.30
1½ to 2½ × 3-16 in.	2.50
3-in. and larger	2.30
Beams	2.25
Channels, 3 in. and larger	2.25
Bands—1½ to 6 × 3-16 to No. 8	2.45
Norway bars	3.50
Bessemer machinery, Steel	2.00
Best cast steel, base price in small lots	7.00

SPIRAL RIVETED PIPE.—The prices given below are f. o. b. factory, freight equalized, with New York City. They are for orders amounting to about $250. For large orders, of several carloads, prices are from 12½% to 20% cheaper.

Diameter in ins.	*Thickness of steel, Birmingham wire gage.	Price per 100 ft. With bolted joints complete.—Plain.	Asphalted.	Galvanized.
3	20	$12.80	$14.21	$20.70
4	18	19.76	21.48	30.74
5	18	23.49	25.70	37.14
6	16	33.05	35.76	49.73
7	16	37.58	40.76	56.82
8	16	43.17	46.80	65.00
9	16	50.06	54.10	74.22
10	14	66.42	71.08	96.15
11	14	71.20	76.57	102.24
12	14	83.75	89.15	118.32
13	14	89.67	96.55	127.98
14	14	99.14	105.51	138.85
15	14	108.05	114.89	151.92
16	14	117.53	124.82	166.58
18	12	167.43	175.95	226.44
20	12	183.79	193.30	248.89
22	12	200.48	210.64	269.21
24	12	219.92	231.07	293.99
26	10	280.26	292.41	370.78
28	10	301.32	314.89	395.37
30	10	324.81	339.15	430.64

*Made in both lighter and heavier gages at corresponding differences in price.

EXPANDED LATH.—Prices of expanded metal varies according to the thickness of the metal and nature of the expansion. Standard metal lath, however, is sold at the following prices f. o. b. mill central Ohio:

Carload Lots.—Price in cts. per sq. yd.

Gage.	Weight per sq. yd.	Black.	Painted.	Galvanized.
27	2½ lbs.	11½	12	18½
26	2½ lbs.	12½	13	19½
25	3 lbs.	13½	14	20½
24	3.4 lbs.	14	14½	21

Small Lots from Store—Price in cts. per sq. yd.

Gage.	Black.	Painted.	Galvanized.
27	13½	14	20½
26	14½	15	21½
25	15½	16	22½
24	16	16½	23

This lath is packed 9 sheets to the bundle.

BARS, CONCRETE REINFORCING.—Some very desirable orders have recently come out, the largest being for the Brooklyn Subway. This contract will involve at least 14,000 tons of variously assorted bars. The inside base price is $1.50 Pittsburg, but the market is so strong that it has to be a very desirable order that will be taken at that figure. Sellers are reluctant to make quotations for extended delivery and some have refused to sell for shipment after May. Considerable difficulty has been experienced in getting shipments with any degree of satisfaction and contractors in a hurry have been compelled to buy from stock. For carload shipments of round or square bars from mills in the Pittsburg District the following prices are ruling:

	Cts. per lb.—Plain.	*Deformed.
¾-inch and larger	1.50 to 1.60	1.55 to 1.65
⅝-inch	1.55 to 1.65	1.60 to 1.70
½-inch	1.60 to 1.70	1.65 to 1.75
⅜-inch	1.75 to 1.85	1.80 to 1.90
¼-inch	2.00 to 2.10	2.05 to 2.15

Bars from stock Pittsburg are usually cut to the required length without extra charge. Prices are as follows:

	Cts. per lb.—Plain.	*Deformed.
¾-inch and larger	1.70 to 1.80	1.80 to 1.90
⅝-inch	1.75 to 1.85	1.85 to 1.95
½-inch	1.80 to 1.90	1.90 to 2.00
⅜-inch	1.95 to 2.05	2.05 to 2.15
¼-inch	2.20 to 2.30	2.30 to 2.40

*The price of deformed bars varies according to the shape and some, owing to the intricate design, are held much higher than this range.

Twisted bars are held at an advance of 10 to 25 cts. over plain bars.

The base price on plain bars from store, Chicago, is 2 to 2.10 cts.

TRIANGULAR MESH.—The following prices are named for triangular mesh concrete reinforcement. The market is firm in sympathy with the higher prices of wire.

Price per 100 sq. ft.

Style No.	Cross sec. area per ft. width.	Carload lots.	Smaller quantities.
4	.012	$1.03	$1.25
5	.077	.82	.99
6	.058	.65	.78
7	.041	.50	.61
23	.170	1.73	2.08
24	.142	1.48	1.80
25	.124	1.32	1.60
26	.110	1.20	1.45
27	.085	.98	1.19
28	.066	.81	.98
29	.049	.67	.82
31	.261	2.55	3.08
32	.225	2.20	2.67
33	.196	1.96	2.38
34	.146	1.51	1.82
35	.109	1.20	1.45
36	.075	.89	1.07
38	.380	3.62	4.38
39	.325	3.12	3.77
40	.283	2.74	3.30
41	.208	2.08	2.52
42	.151	1.58	1.92
43	.101	1.13	1.36

This material is made in regular widths of 18, 22, 26, 30, 34, 38, 42, 46, 50, 54 and 58 ins. Standard lengths of rolls are 150, 300 and 600 ft. Cutting to special length is charged extra.

INTERLOCKING PLATES.—The following prices are named for interlocking steel plates, of 24 gage black steel f. o. b. mill central Ohio:

Length.	Per 100 sq. ft.—Weight.	Price, Flat.
Under 4 ft.	160 lbs.	$11.00
4 to 6 ft.	160 lbs.	10.00
6 to 8 ft.	160 lbs.	9.50
8 to 10 ft.	160 lbs.	9.00
10 ft.	160 lbs.	8.50

Curved sheets are held at an advance of $1 per 100 sq. ft. over flat.

For a desirable order prices might be shaded about 10%.

SWITCH POINTS.—The following prices are named f. o. b. mill for switch points in lots of ten or more pair: For 60-lb. rail, 10-ft. points, $16.25; 15-ft. points, $22.50; for 70-lb. rail, 10-ft. points, $18.00; 15-ft. points, $25; for 80-lb. rail, 10-ft. points, $25.50, 15-ft. points, $27.75; for 90-lb. rail, 15-ft. points, $30.50; for 100-lb. rail, $33.50. All of the above are furnished with 3 rods, except the 10-ft. points for 60 and 70-lb. rail, which have only 2.

FROGS.—For mill shipments, of 10 or more, prices are as follows: Bolted frogs No. 7; for 60-lb. rail, $15; for 70-lb. rail, $16.50; for 80-lb. rail, $18; No. 8 frogs for 90-lb. rail, $21; for 100-lb. rail, $23. Plate frogs No. 7, riveted to ⅝ in. plate for 60-lb. rail, $18; for 70-lb. rail, $20; for 80-lb. rail, $21.50. No. 8 frogs bolted to a ¾ in. plate for 90-lb. rail are $25.50 for 100-lb. rail, $27.50.

BUMPING POSTS.—The Ellis patent bumping post for freight tracks complete with 2 bent 80-lb. rails, angle bars and cross bars is sold at $55 f. o. b. Chicago.

OLD MATERIAL.—There are some scattering inquiries for melting steel and select brands of railroad wrought, but as a rule the scrap markets are lifeless. Dealers are anticipating a general demand for all grades of old material some time during the first quarter. Machinery cast is quiet, feeling the weakness of the pig iron markets, and dealers are, as a rule, willing to contract on the present basis of iron.

No business of importance is being transacted in rolling mill grades.

Foundry grades are cheaper than early in December, but otherwise prices for straight carloads are as follows:

	Per gross ton—New York.	Chicago.	Cleveland.	St. L...
Old steel rails (under 6 ft.)	$17.00 to $17.50	$16.25 to $17.25	$17.50 to $18.00	$16.75 to $17.25
Old steel boiler plate	.....	.....	14.00 to 14.50	.....
Malelable iron	14.00 to 14.50	.....	15.00 to 15.50	.....
Heavy steel	14.75 to 15.25	15.50 to 16.00	16.25 to 16.50	15.50 to 16.00
	Per net ton—			
R. R. wrought	18.00 to 18.50	14.50 to 15.00	16.00 to 16.50	14.50 to 15.00
Pipes and flues	14.00 to 14.50	11.75 to 12.00	12.00 to 12.50	11.75 to 12.00
Stove plate	11.50 to 12.00	11.50 to 12.50	12.00 to 12.50	11.50 to 12.50
Machinery cast	15.00 to 15.50	14.50 to 15.00	15.00 to 15.50	14.00 to 14.50
Angle bars, steel	.....	15.50 to 16.00	.....	15.50 to 16.00

LUMBER.

With the exception of cypress, ... are unchanged from a month ago. ... mills have made a practically uniform ... rate of $2 per M. on this kind of lumb... the south. High grade oak is report... cars. A southern wood which has come ... prom... inence lately is gum. Some of ... yellow pine sawyers in Alabama complain ... they are unable to get full prices for th... prod... uct. Long-leaf yellow pine is on... much firmer basis and prices are tren... upwards. The yellow pine people h... either over enthusiastic or unduely depr... and at present optimism is in the a... ency. The latter part of December ... was a general snow throughout the nort... part of the country which will greatly ... ilitate winter lumbering preparations. At ... same time labor in that section of the co... has been so generally employed during ... year that many men are reluctant abo... going into the woods on account of the h... aber and in consequence the cut may not ... much larger than a year ago.

During the past two months the m... have added somewhat to the stocks on han... which may be a fortunate circumstance, for the de... mand in the spring will probably ex... the production.

There is a general complaint all ... the country of a lack of water, so th... it is hardly probable that the mills will be able to lay up as large a stock as might be desired.

LONG-LEAF YELLOW PINE.—The market is exceptionally firm. The railroads have been large buyers recently and many contractors have made extensive purchases. Considerable timber, however, is in the yards in this district, and in the south there is a fair quantity. There is not enough timber down, however, to make it press on the market. The following prices are quoted for "Merchantable" under the 1905 rules of the association:

Price per M. in Yard, New York.

Size.	Length—20 ft. base.	21 to 24 ft.	25 ft.	26 to 30 ft.	31 to 35 ft.
8 in. wide and under by 4 in. thick and under.	$31	$32	$33	$34	
8 to 10 in. wide by 10 in. thick and under	33	34	35	36	
10 to 12 in. wide by 12 in. thick and under	36	37	38	39	
12 to 14 in. wide by 14 in. thick and under	43	44	45	46	
14 to 16 in. wide by 16 in. thick and under	45	46	47	48	

For pieces longer than 35 ft. and less than 40 ft. add from $4 to $8 to base price.

NORTH CAROLINA PINE.—Buying by railroads and other large consumers has made a very firm market. Prices are considerably higher than in the summer and for pieces less than 20 ft. long. The following are named per M. for car lots f. o. b. New York City:

Size.		Size.	
2 × 4 in.	$18	2 × 10 in.	$21
2 × 6 in.	18	2 × 12 in.	22
2 × 8 in.	18		

Roofing boards, either ship lapped or tongue and grooved are as follows:

Size.		Size.	
1 × 6 in.	$17	1 × 10 in.	$19
1 × 8 in.	18	1 × 12 in.	21

SPRUCE.—Most of the spruce used in the local market comes from West Virginia, although in some of the smaller sizes Canadian spruce is cheaper. The following prices are for carload lots f. o. b. New York City:

Size.	*Length, 10 to 20 ft.
2 to 4 in. thick by 4 to 8 in. wide	$27.50 to $28.50
2 to 4 in. thick by 10 to 12 in. wide	29.00 to 30.00
Sizes.	Length, 12 to 16 ft.
1 × 6 to 1 × 10	$26.00 to $28.00

*For each additional ft. in length, over 20 ft., add $1 per M.

FACTORY FLOORING.—Tongue and grooved factory flooring of North Carolina pine from 2 to 4 ins. thick and 5 to 9 ins. wide is sold at $19 per M. f. o. b. Norfolk, Va. On cars New York City it can be had for $23 per M.

HEMLOCK.—Pennsylvania hemlock is coming in the market rather freely and prices are not as strong as they might be, although these quoted below represent an advance of $1 to $2 over those ruling last year. For carload lots and over, in the vicinity of New York, the following prices are quoted:

Price per M. f. o. b. cars New York:

Size.	Length—10 ft.	12 ft.	14 ft.	16 ft.
2 × 4 in.	$23.00	$21.00	$21.00	$23.00
2 × 6 in. to 2 × 10 in.	21.00	21.00	21.00	18 to 20
3 × 4 in. to 12 × 12 in.	21.50	21.50	22.00	19 to 21
1 × 8 in.		18.00	18.00	18.00
1 × 10 in. and 1 × 12 in.			18.50	18.50	18.50

PILES.—Pine piles are in excellent demand and are sold at the following prices f. o. b.

New York city: 60 to 64 ft., $7; 65 to 69 ft., $8; 70 to 74 ft., $9.50; 75 to 79 ft., $11; 80 ft. and longer, $14.

In New York the following prices are named for carload lots of yellow pine piles, in cts. per lin. ft.: 40 to 50 ft. long, 12-in. butt, 7 cts., 14-in. butt, 9 cts.; 50 to 60 ft. long, 12-in. butt, 9 cts.; 50 to 60 ft. long, 12-in. butt, 10 cts.

The price of yellow pine ties was about 2 cts. each last month. The advance is strong and the following quotations named for carload lots f. o. b. New York:

	Cts. each.
7 × 9—8 ft. 6 ins.	79 to 80
7 × 8—8 ft. 6 ins.	77 to 78
7 × 9—8 ft.	77 to 79
6 × 9—8 ft.	72 to 74
6 × 8—8 ft.	66 to 69

SHINGLES.—The following prices are quoted per M. for cypress shingles. New York City: No. 1 Hearts, 6 × 18-in., $7.50; Primes, 6 × 18-in., $6.50; No. 1 Hearts, 6 × 20-in., $10; Primes, 6 × 20-in., $8.

LATH.—Eastern spruce slab lath can be had at $3.50 to $3.75, New York City.

In the following tables and paragraphs are given the prices, per M., for wholesale lots f. o. b. Ohio River points. The carload freight rates, per 100 lbs., to the principal cities are as follows: Baltimore, 16 cts.; Boston, 21 cts.; Buffalo, 10 cts.; Cleveland, 10 cts.; Detroit, 10 cts.; Indianapolis, 7 cts.; New York City, 19 cts.; Philadelphia, 17 cts.; Pittsburg, 10 cts.; Syracuse, 14 cts.; Toledo, 9 cts.

POPLAR, ROUGH STOCK.

	Classification and Width.			
Thickness.	A 1, 7-in. and over.	Selects, 6-in. and over.	No. 1 Common, 5-in. and over.	No. 2 Common, 4-in. and over.
1 -in.	$56	$43	$35	$23
1½-in.	58	45	37	25
2 -in.	59	46	38	33
3 -in.	66	51	44	33
4 -in.	69	54	46	35

POPLAR SQUARES.

	Classification.	
Size.	A 1.	Common.
4 × 4-in.	$57	$47
5 × 5-in.	61	50
6 × 6-in.	61	51
8 × 8-in.	68	58
10 × 10-in.	72	62
12 × 12-in.	78	68

CHESTNUT.

	Clasification and Width.		
Thickness.	A 1, 6-in. and wider.	No. 1 Common, 4-in. and wider.	Sound Wormy, 3-in. and wider.
1 -in.	$45	$33	$18
1½-in.	47	35	19
2 -in.	48	36	20

ASH.

	Classification and Width.		
Thickness.	A 1. 5-in. and over.	No. 1 Common, 4-in. and over.	No. 2 Common, 3-in. and over.
1 -in.	$50	$30	$20
2 -in.	60	37	24
2½-in.	67.50	41	29
3 -in.	70	41	29
4 -in.	75	48	29

WHITE OAK.

	Classification and Width.		
Thickness.	A 1. 6-in. and over.	No. 1 Common, 4-in. and over.	No. 2 Common, 3-in. and over.
1 -in.	$48	$31	$20
2 -in.	53	34	23
2½-in.	60	40	27
3 -in.	64	42	28
4 -in.	72	45	29

HICKORY.—The following prices are named: For Prime pieces, 1 to 2 ins. thick, wider than 4 ins., $50 to $66; 2¼ to 4 ins. thick, wider than 4 ins., $72 to $80; No. 1 Common, 1 to 2 ins. thick, wider than 3 ins., $30 to $40; 2¼ to 4 ins. thick, wider than 3 ins., $45 to $55.

WALNUT.—Prime stuff, 1 to 2 ins. thick and over 6 ins. wide, is held at $100 to $118; No. 1 common, 1 to 2 ins. thick and over 4 ins. wide, commands $57 to $62.

CHERRY.—The best grade of material, 1 to 2 ins. thick and wider than 6 ins. sells at $90 to $100; No. 1 common, 1 to 2 ins. thick and wider than 4 ins., is sold at $45 to $55.

CREOSOTING.—The cost of creosoting timber with about 12 lbs. of oil per cu. ft. averages $20 per M.

Coastwise receipts of southern pine at New York for the eleven months of 1909 were 450,517,185 ft., about 64% in excess of the corresponding 1908 figures. Lumber receipts at Boston for the eleven months were 281,703,208 ft., a 35% gain over the like 1908 total.

PAVING MATERIALS.

GRANITE BLOCK.—The demand is excellent and considerable work is promised for next year. Several contracts are in prospect, which will involve over a million blocks. Prices are very firm, and although no change is expected before spring an advance may be made at that time. Cape Ann granite, made to the old style block, commands $1.50 per sq. yd. Dressed block to lay with ¼-in. joint $1.80 per sq. yd. These prices are for blocks delivered alongside dock New York city.

SAND STONE.—Medina sand stone paving blocks are delivered Buffalo, N. Y., at $1.60 per sq. yd.

ASPHALTUM.—The demand is limited just at the moment and paving work is at a standstill. Prices, however, continue remarkably firm. Trinidad asphalt commands from $20 to $25 at seaport, California $25 to $30, f. o. b. New York, and $15 to $19 at point of shipment. Port Arthur fluxing is higher than last month and is now held at $16 to $18, New York.

ROAD OILS.—Trade is quiet and 30% asphaltum oil is sold at 4 cts. per gal. f. o. b. New York. Texico macadam asphalt, 90% to 95%, is 10 cts. per gal. in bulk f. o. b. New York or Philadelphia. A or X tarvia in barrels is 8½ to 9½ cts. per gal.; B grade, in barrels, is 7 to 8 cts. per gal.

PAVING BLOCKS, WOOD.—Trade is quiet but prices are a trifle stronger than they were in the summer. For long leaf yellow pine blocks having not less than 20 lbs. of oil per cu. ft. the following prices are asked per sq. yd. f. o. b. New York City: 3 ins. thick, $1.70; 3¼ ins. thick, $1.80, and 4 ins. thick, $2.10. These prices may vary slightly according to the different specifications, but probably not more than 15 cts. per sq. yd.

VITRIFIED BRICK.—Paving blocks of vitrified clay are used to a greater extent than formerly and the output of brick is apparently decreasing. The price per M. varies according to the size, but in general both brick and block average 55 to 65 cts. per sq. yd. f. o. b. factory. Some makers are asking 48 to 60 cts. per sq. yd. About 38 to 46 blocks and 55 to 62 bricks are required per sq. yd. At the present price, and freight rate, brick and block would cost from $1 to $1.25 delivered in New York and New England States. In Ohio, Pennsylvania, Indiana and Illinois they would average from $0.75 to $1 delivered.

CLAY PRODUCTS.

PIPE; VITRIFIED CLAY.—The prices of tile sewer pipe continue low and the market is more or less unsettled. The general discounts from the "Eastern List" are, 85% up to 24 in.; 78% for 27 and 30 in.; 73% for 33 and 36 in. At these discounts net prices are as follows, for carload lots, f. o. b. factory:

2 & 3 in.	$0.027	18 in.	$0.289
4 in.	.034	20 in.	.382
5 in.	.042	21 in.	.425
6 in.	.051	22 in.	.468
8 in.	.085	24 in.	.715
9 in.	.102	27 in.	.93
10 in.	.128	30 in.	1.21
12 in.	.17	33 in.	1.69
15 in.	.23	36 in.	1.89

ROOFING TILE.—The best grade of roofing tile in flat blocks for high grade roofs is sold at $20 per M. for run of kiln and $30 per M. for selected. Glazed blocks can be had at $15 to $16. These prices are for 6 × 9 blocks f. o. b. factory. It requires 258 blocks to lay 100 sq. ft. of roof surface and, in consequence, the price per 100 sq. ft. of roof surface would be $5.87, for the glazed blocks; $7.82 for the run of kiln; and $10.73 for the selected.

Vitrified tile unglazed, of the French or Spanish type, is sold at approximately $8.50 per 100 sq. ft. f. o. b. factory. Glass tiles are sold at 60 cts. each.

DUCT, TELEPHONE AND TELEGRAPH.—Prices are steady, but the volume of business taken last month was small. Delivered within Lighterage Limits, New York City, duct is sold at 4 to 4½ cts. per duct. ft.

DRAFT ANIMALS.

HORSES.—Draft horses are bringing high prices, considering the lateness of the season. It is practically impossible to get a good horse weighing from 1,100 to 1,200 lbs., 5 to 6 years old, at much less than $175 to $225. At an auction held in New York City last month some of the prices were as follows: A fair horse weighing 1,050 lbs., and 8 years old brought $125, one 6 years old, in fairly good condition, weighing 1,200 lbs., brought $175. A rather rough horse 8 years old, weighing 1,250 lbs., brought $175. A horse that would be classed as poor, and at least 12 years old, weighing not over 1,000 pounds, brought $140. A very good draft horse 5 years old, weighing at least 1,350 lbs., brought $230, which was the top price of the sale. All the above horses were guaranteed "kind and good wind."

About 15 horses, used by a contractor for the season, were sold in the ring without guarantee. The poorer ones, which were over 15 years old, brought from $60 to $80. An old horse weighing 1,100 lbs., brought $115 and several other poor specimens, weighing under 1,000 lbs., and of uncertain age, brought $30 to $50.

MULES.—There is an excellent demand for this kind of rough stock, and in the New York market they are bringing high figures. The dearth of good draft horses and consequent high price is a factor in a mule market at this time. In the Jersey City, N. J., mule yard, an average mule, 15 hands high, well broke and fresh from the farm, weighing 1,000 to 1,100 lbs. and about 5 years old, brings $225. For a well matched team standing 15½ hands high and weighing 2,500 lbs., $600 is asked. Scrub animals that have been used on construction work, weighing from 900 to 1,000 lbs., are bought at about $100 and sold at $125. A number of mules have recently been bought for barge canal work.

LINE CONSTRUCTION.

TELEGRAPH WIRE.—The following prices are current on telegraph wire, the inside being for ordinary steel while the ouside price is for extra best steel. The sizes are in Birmingham wire gage and the price in cts. per lb.: Nos. 6 to 9 is 4¾ cts.; Nos. 10 to 11, 3¾ to 4¼ cts.; No. 12, 3¼ to 4¾ cts.; No. 14, 3¾ to 5¼ cts. These are all in single lengths without splice or joint and actual freight is allowed from point of manufacture, Trenton, N. J., when it does not exceed 25 cts. per 100 lbs.

WIRE, COPPER TRANSMISSION.—The price of 15.25 cts. established on Nov. 23 is the quotation for No. 8 wire and heavier, both bare and insulated, in carload lots New York City. Grooved trolley wire is held at an advance of 0.25 cts. per lb. over the base price.

ALUMINUM WIRE.—The demands for aluminum in crude forms is somewhat better, principally from the steel makers. Wire, however, is unchanged at 31 cts. base.

INSULATORS.—Glass insulators in lots of more than 1,000 and less than 10,000 are sold at the following prices per 1,000: Double petticoat 20 oz., $33; Western Union, $30.25; No. 2 cable, $53.90; No. 4 cable, $210; Muncie type, 7-in., $236.50; No. 3 triple petticoat, 4½-in., $90.75.

POLES.—The market is strong and prices are very firm. A shipper of poles on the Pacific coast gives the following prices for white cedar poles f. o. b. cars Western Washington, in carload lots:

Length in feet.	Price each. Diameter at top, 6-in.
30	$2.40
35	2.80
40	3.20
45	4.50
50	5.00
55	5.50
60	6.00
65	9.75
70	10.50
75	11.25
80	12.00

A shipper in Michigan, where the freight rate to Chicago is 12½ cts., sends the following quotations:

Length in feet.	Price each. Diameter at top.		
	5-in.	6-in.	7-in.
25	$0.50	$1.00	$1.40
30	....	1.40	3.50
35	....	3.75	4.75
40	....	4.75	7.00
45	....	7.25	9.50
50	....	10.00	12.00

POLES.—Chestnut telephone poles, 45 ft. long, with 6-in. tops, are sold at $5.50 each, delivered in New York state.

FIR CROSS ARMS.—A new price was made on cross arms Dec. 1, 1909. The following list represents current quotations:

Size, 3¼ × 4¼ in.	Price per arm, in cts. Pacific Coast.	Chicago.	New York.
3 ft., 2-pin	8	13¼	15½
4 ft., 4-pin	11	18¼	21
5 ft., 4-pin	16	26¼	28½
6 ft., 4 and 6-pin	20½	31½	36
8 ft., 6 and 8-pin	28	45	48½
10 ft., 8, 10 and 12-pin.	37	55½	67½

POLE STEPS.—The following prices are named for galvanized pole steps per 100: Size 9/16 × 9-in., $2.44; ⅝ × 9-in., $3; 9/16 × 9-in., $3.31.

METALS.

A marked improvement was noted in the copper market in December. Consumers, both here and abroad, bought more freely than in November. Although there was no spectacular buying, prices fluctuated much more widely than in previous months. Last month, sales of electrolytic were made as low at 13.25 cts. and as high as 13.87½ cts., at which figure the year closed. Lake copper is more or less nominal, the principal producers quoting 14 to 14¼ cts. The most interesting news in connection with the copper market last month was the proposed curtailment of production. The largest producers signified their intention of restricting productions to about 90% of normal, and although there was no tangible evidence that such had been done it was generally believed that the orders had been given out. Th restriction of production to this amount would about balance production and consumption and as consumption increased, price would advance correspondingly. It is a significant fact that, although the wire makers are not busy, consumption is taking about 90% of the output. When the wire makers have more business, as they will later this year, the demand may be abnormally large. The statistics of copper production show that the output in 1909 was 500,000 tons, the exports were 300,000 tons and the imports approximately 150,000 tons. This gives a supply available for American consumption of 360,000 tons.

ROOFING COPPER.—The demand for copper sheets of all grades is excellent. The price is unchanged from that quoted in the last issue: 18 cts., basis.

LEAD.—While December is usually supposed to be the dull month of the lead trade it furnished an unusual amount of excitement this year. The leading producer, the American Smelting & Refining Co., made three advances each of $2 per ton and is now asking, for lead in 50-ton lots, 4.70 cts. Spot lead is held at 4.75 cts. in New York and 4.65 cts. in St. Louis. Lead from store is held at about 5.50 to 5.75 cts. per lb.

LEAD WOOL.—The price continues unchanged in spite of much higher quotations for pig lead. For out of town shipment, lead wool is quoted at 8¼ cts.

LEAD PIPE.—Prices are much firmer. A sharp advance in December carried the price up ½ ct. To large consumers and jobbers the price is 5¾ cts. Plumbers can obtain it, in small quantities, at 6.40 cts. These figures are net 30 days, less 5% off 10 days.

SHEET LEAD.—The base price of sheet lead, to jobbers, is 6¼ cts.; to plumbers, 6¾ cts. The demand is said to be fair.

PIG TIN.—This metal, although of indifferent importance to engineers, as it is seldom used except in composition with other metals, but the price has advanced so abnormally as to affect quotations on babbitt, solder and tin foil. The London operators cornered the market in December and rushed the price up 4 cts. per lb. The high figure of 34 cts. being quoted the last days of 1909. Since then prices have receded slightly and five-ton lots can be had at approximately 32 cts., small quantities at 34 cts. "Strictly ½ and ½ Solder" is 22 cts. per lb. and Babbitt metals vary from 18 to 25 cts., according to the fineness. The advance in solder has been about 2 cts. a lb. and in Babbitt metal about 1½ cts.

MILL SUPPLIES.

SHAFTING.—Cold drawn steel shafting is sold by the makers at 55% discount, in carload lots, and 50% discount in less than carload lots. The following prices, per ft., are based on less than carload lots: ¾-in., 4.15 cts.; 1-in., 7.30 cts.; 1¼-in., 11.50 cts.; 1½-in., 15 cts.; 1¾-in., 20.50 cts.; 2-in., 25.50 cts.; 2¼-in., 38.75 cts.; 2½-in., 41.75 cts.; 2¾-in., 50 cts.; 3-in., 60 cts.; 3¼-in., 90 cts.; 4-in., $1.27½; 4½-in., $1.78; 5-in., $2.35; 5½-in., $3; 6-in., $3.85.

BELTING.—The prices of all kinds of belting have advanced in the last six months. This is due to a decidedly better demand and, more especially, to an increasing cost of raw materials. The discounts on single and double leather belting are as follows: Extra heavy, 55%; heavy, 60%, medium, 60 and 10%; light, 60 and 10 and 10%; shoulder, 75%; standard, 70 and 10%. Rubber belting is sold at the following discounts: Competition, 75%; standard, 70%; best grades, 60 and 10%.

In the following list is given the net price, per ft., of the best grade of rubber belting, figured at a discount of 60 and 10% from list:

Diam. ins.	2-ply.	4-ply.	6-ply.
3	$0.10	$0.135	$0.21
4	.135	.19	.28
5	.165	.235	.35
6	.195	.28	.42
7	.235	.33	.535
8	.265	.38	.57
9	.315	.425	.64
10	.34	.53	.72
12	.42	.63	.79
14	.49	.69	1.04
16	.56	.80	1.20
18	.63	.91	1.36
20	.72	1.02	1.52
22	.79	1.14	1.70
26	.98	1.39	2.08
28	1.07	1.51	2.27
30	1.15	1.64	2.46

LUBRICATING OILS.—The price of lubricating oils varies according to the classification by manufacturers or jobbers. In many cases engine or cylinder oil is sold at a higher price, under a special or trade name, than the purer oils. In general, however, the following price prevails to large consumers of approved credit who buy in 5-bbl. lots or larger:

	Cts. per gal.
*Cylinder, light filtered	23 to 32
*Cylinder, dark	20 to 27
*Cylinder, steam refined	14 to 22
Neutral Oils, filtered—	
Stainless white, 32 to 34 gravity	28 to 29
Lemon, 32 to 34 gravity	19 to 21
Dark, 32 gravity	17 to 19
Crank case oil, black	16 to 18

*Prices vary according to tests.

COTTON WASTE.—The rapid advance in raw cotton has forced the prices of waste to high levels.

No. 1 clean white waste is quoted at 9 cts. and B grade at 8½ cts. per lb. These quotations are for single bale lots.

OILS AND PAINTS.

LINSEED OIL.—The continuous advance throughout the early part of the year has been steadily maintained. It was thought that when prices reached 60 cts. early in the fall that there would be a general falling off in the demand and when quotations were moved up to 65 cts. in December, it was believed that the buying would cease. However, prices have advanced steadily durina the month, out of town raw is now quoted at 70 cts. per gal. and city raw 71 cts. per gal. These are for 5-bbl. lots. Boiled oil being held at the usual advance of 1 ct. per gal. over raw. The advance is a legitimate one as flax seed is very high; the crop is short and seed is selling at higher figures than before in years. The Canadian crop, too, is meager, so that there is no relief in sight until the next season.

SPIRITS TURPENTINE.—Prices are somewhat easier than they were a month ago due principally to a falling off in the demand, but also large receipts at Savannah. Turpentine at that point is quoted at 54½ to 55 cts. In Charleston the market is quiet, prices are easy at 54 cts. Five bbl. lots are quoted at 56½ to 57 cts. New York.

PETROLEUM PRODUCTS.—The Standard Oil Company gives the price of crude oil in bbls. at the wells as follows: Pennsylvania, second sand, and Tiona, $1.43; Mercer black, 90 cts.; Corning, 79 cts.; New Castle, 87 cts.; North Lima, 84 cts.; Indiana, 79 cts.; Illinois, 60 cts.; heavy, below 30 gravity, 52 cts. In the local market petroleum tank wagon delivery is 8½ cts.; auto-naphtha and stove gasoline 13¾ cts.

Fuel oil in tank cars is quoted at 95 cts. to $1.05 per bbl. of 42 gals. at seaboard points.

PAINTS.—The demand for white lead in oil is unusual for the winter months. Stocks are low and both consumers and retailers did not anticipate any increase in price. The American Smelting and Refining Co., however, put up the price of pig lead three time in December and on Jan. 3 the National Lead Co. advanced its quotations for paints. The prices of white lead in oil, or dry, are as follows for lots of 500 lbs. and over: In 100, 250 and 500-lb. kegs, 7¼ cts. per lb.; in 25 and 50-lb. kegs, 7¾ cts. per lb. Red lead and litharge in bbls., 5½ bbls. and 100-lb. kegs is 7¼ cts. per lb.

Brown metallic is $16.50 to $22 per ton; red metallic can be had at $14 to $18 per ton. American Venetian red is sold, in ton lots at 75 cts. to $1.50 per 100 lbs.; English at $1.15 to $1.60 per 100 lbs.

Graphite bridge paints are quoted at 65 cts. per gal. in car lots and 70 cts. per gal. in bbl. lots.

Hydrex preservative paint is sold at 75 cts. per gal. in bbl. lots New York.

MISCELLANEOUS.

PAPER.—The prices of building and waterproofing papers have varied little during the month. Hydrex waterproofing felt is quoted at $1.25 per 100 sq. ft. in carload lots, New York City. Other quotations are as follows:

For 1-ply, which is sold by the net ton, $31. Other grades are sold by the roll of 108 sq. ft., 2-ply standard weighing 40 lbs., to the roll is 45 cts.; 2-ply extra heavy, weighing 45 lbs. to the roll, is 55 cts.; 3-ply standard, weighing 60 lbs. to the roll, is 65 cts., and 3-ply extra heavy, weighing 70 lbs. to the roll, is 75 cts.

Rosin-sized sheathing, 500 sq. ft. to the roll, is 38 cts. per roll for the light, weighing 25 lbs. to the roll; 45 cts. is named for medium weight, 30 lbs. to the roll, and 60 cts. for the heavy, weighing 40 lbs. to the roll.

Deafening felt 6 and 9 lbs. to the sq. ft., is $40 per net ton. Red rope roofing is $1.75 per roll of 250 sq. ft.

ROOFING SLATE.—The demand is better and prices are very firm. No slate is being quarried now and, in some parts of the country, construction is going forward rapidly. Stocks are not large and prices might work higher. The following quotations are for carload lots, f. o. b. quarry:

	Per 100 sq. ft.
Vermont, sea green	$4.00 to $4.50
Pennsylvania, ribbon	4.25 to 4.75
Maine, Brownsville	5.50 to 6.00
Red	10.00 to 12.00
Unfading green	4.50 to 5.50

ROPE.—The market for rope is not as strong as a month ago. Pure Manila of the highest grade is quoted at 8 to 8½ cts., second grade at 7½ cts. and the less desirable qualities at 7¼ cts. per lb. Pure sisal commands 7½ to 8 cts., second grade 6 cts. per lb. Jute rope, ¼ in. and larger is 5 to 5½ cts. per lb.

PITCH.—For the best quality of roofing and waterproofing pitch, $14 to $15 per net ton is asked delivered in New York.

ROOFING CEMENT.—Texaco roofing cement is sold at $25 a ton, in carload lots, f. o. b. cars New York City.

OAKUM.—Prices are a little easier than a month ago and in 50-lb. bales, the best grade of oakum can now be had at 6¼ to 6¾ cts. United States Navy is held at 5¾ to 6 cts., while plumbers' can be had at 2½ to 3 cts. per lb.

WATERPROOFING.—The following prices are named for carload lots of waterproofing compounds, f. o. b. cars New York. Hydrex waterproof felt, $1.25 per 100 sq. ft. Hydrex compound "A," 26 cts. per gal. Hydrex compound "B," 18 cts. per gal.

Texaco waterproofing cement is $30 per ton, in car lots, f. o. b. cars New York or Philadelphia.

RUBBER.—The rubber market fluctuates with unusual rapidity but the manufacturers of rubber products used in engineering in most cases protect themselves and, in consequence, the price of hose, both fire and air brake, moves but little. The same is true of rubber belting. The market during 1909, however, was unusually erratic, as for example, fine para which was sold at $1.20 in January, 1909, advanced to $2.16 in October and is now approximately $1.80. This grade of rubber is perhaps the most important of any as it is used everywhere where high pressures are required. The best automobile tires, inner tubes, are made of almost all para.

The Ceylon rubbers which are much used for mixing command nearly as high a price as para, but now they are a little higher, being quoted at $2.40. Early last year, however, they could be readily had at $1.23. Cheaper varieties of rubber such as Caucho is 60 to 70 cts.; Guayule, 85 to 90 cts.; coarse Para 80 to 90 cts.

The importation into the United States during the year 1909 will exceed, in value, any other year. In the first ten months it amounted to $73,000,000. Brazil, one of the cheap contributors of the India rubber supply to the United States, is sending us approximately 35% of our total importation. The rubber industry has changed materially in the last decade, formerly it was gathered from a forest and no attempts were made at cultivation. In recent years large plantations have been developed particularly in the East and these estates, as the plantations are called, produce anywhere from 200,000 to 500,000 pounds annually.

Numerous attempts have been made to produce rubber in Mexico and Central America, but they have been principally stock jobbing schemes because of the economic conditions. The climate is favorable and the soil is good enough to grow the best kind of rubber trees, but laborers on the Western Hemisphere will not work for the meager pittance that the Singhalese peasants will and until such conditions change it is doubtful whether these plantations will be a success as far as rubber production is concerned. With the advance in crude rubber, old rubber has likewise trended upward and scrap rubber now commands anywhere from 50% to 100% more than it did a year ago.

EXPLOSIVES.—The price of explosives varies according to the locality. They are, almost invariably, sold delivered either at the work or the nearest railroad station. The freight rates are exceptionally high on explosives and consequently much irregularity in quotations is apparent. There are, however, at least eight factories of the leading manufacture located in various parts of the country and consequently the haul is not over 800 miles in any company's domin. Dynamite, of the kind usually used by contractors, is approximately 11 to 13 cts. per lb. f. o. b. factory in ton lots. Blasting powder, classified as "soda" grade, is sold at $1.20 to $1.40 per keg or 25 lbs. in lots of 10,000 lbs. The following prices prevail on Trojan in car load lots, minimum 24,000 lbs., f. o. b. Pacific Coast points: No. 1, 13½ cts.; No. 2, 10½ cts.; No. 3, 10 cts. They have a disruptive force equivalent to 60%, 40% and 30% of nitro-glycerine.

VAULT LIGHTS.—Lenses for concrete vault light work are sold by the piece and are usually made from the mold of the contractor. The price varies according to the weight, but they can be had at 4 to 5 cts. per lb. A "bulls eye" 3 ins. in diameter and 3 ins. thick weighs about 12 oz. and is sold at 3 cts., in large lots.

CARS AND LOCOMOTIVES.—The building of railroad rolling stock last year showed little, if any, improvement over 1908, which was also very poor. The "Railroad Age-Gazette" computes that the number of freight and passenger cars built in the United States and Canada in 1909 was 96,419. In 1907 it was 289,695. The locomotives built last year were 2,887 and in 1907, the boom year, 7,362.

The outlook for business this year is good, as many of the car builders have their order books well filled.

LIGHTERAGE LIMITS.—The free delivery of "Lighterage Limits" in New York City are as follows: In Manhattan, from a point opposite the Fort Lee ferry south along the Hudson River around the Battery and north along the East and Harlem rivers to the Jerome Ave. bridge at 155th St. In New Jersey, south from Fort Lee ferry to Bayone City; points on the north and east shore of Staten Island between Bridge Creek (Arlington) and Clifton, both inclusive, and including Elm Park, Eristina and Shooters Island. In Brooklyn, from 69th St., Bay Ridge, north to Pot Cove, Astoria, Long Island City.

INDUSTRIAL NOTES.

THE MILLARD CONSTRUCTION CO. announces its corporate title changed to Keystone State Construction Co. The company will retain its present offices at 704-709 Pennsylvania Bldg., Philadelphia, Pa.

THE HAROLD L. BOND CO., formerly of 140 Pearl St., Boston, Mass., dealer in contractors' railroad and mill supplies, states that owing to increase of business larger quarters have been taken at 383 Atlantic Ave.

THE CONTRACT for placing concrete piles in the foundations of the People's National Bank Building at Charleston, S. C., has been awarded to the Raymond Concrete Pile Co., of New York and Chicago. Thompson & Frohling, New York, Archs. Hedden Construction Co., Gen. Contractors.

IT IS REPORTED that one of the largest sewer pipe plants in the world will be built at Cleveland, Ohio by a company of capitalists headed by Mr. H. A. Robinson of Akron, at an approximate cost of $750,000. The plant when completed will employ about 700 men.

THE GENERAL FIREPROOFING CO., of Youngstown, Ohio, state that owing to their increased foreign trade, they have found it necessary to open an export office at 396-398 Broadway, New York. Mr. A. D. Level, formerly with the U. S. Steel Products Co., will handle all export business through this office.

HENRY A. HITNER'S SONS CO., of Huntington and Aramingo Sts., Philadelphia, Pa., announce the discontinuance of their New York office, 90 West St., also of their branch office, Pennsylvania Bldg., Philadelphia. Their representative, Mr. Wm. B. Ilko, is now located at the main office from which all future business will be transacted.

ACCORDING TO PRESS REPORTS, the Baldwin Locomotive Works of Philadelphia, Pa., for the year ending Dec. 31, 1909, turned out 1,013 locomotives, at an approximate total value of $13,000,000. This is a large increase over 1908, when only 617 locomotives were built, but below 1907 output, when 2,663 locomotives were built by that company.

THE RAYMOND CONCRETE PILE CO., of New York and Chicago has been awarded the contract for the complete foundations, including excavation, concrete piling, concrete footings, curbs, etc., of the warehouse building for E. S. Shepherd, which will be occupied by the Crerar-Adams Co., of Chicago. Ottenheimer, Stern & Reichert, Chicago, Archs.

MR. A. M. CRAIN, Assoc. Member Am. Soc. C. E., has opened an office for an engineering and contracting business in the Brandeis Bldg., Omaha, Neb. Mr. Crain has been connected with the construction of the Detroit River tunnel as Division Engineer for the Detroit River Tunnel Co. and General Superintendent for the Butler Bros. Construction Co. for the last three years.

THE MAIN OFFICES and warerooms of the Lynchburg Foundry Co., at Lynchburg, Va., were destroyed by fire on the morning of Jan. 1, entailing a loss of about $35,000, which was fully covered by insurance. This company owns and operates the McWane Pipe Works at Lynchburg and the Radford Pipe Works at Radford, Va., and we are advised that the manufacture of pipe will be continued without interruption on account of the fire.

THE NORTHERN EQUIPMENT CO., of Chicago, which recently absorbed the American Boiler Economy Co., reports on account of the increase in the sales of the Copes boiler feed regulator and the Copes pump governor, they have been compelled to move to a larger factory building. This company has given up the office in the Old Colony Building. The factory and main office is now located at 408-418 West Indiana St., Chicago, Ill.

THE MINNEAPOLIS STEEL & MACHINERY CO., of Minneapolis, reports the first yearly conferences of its District Representatives and Department Managers December 14, 15 and 16. Papers were read by G. L. Gillette, G. W. Pope, A. M. Burch, A. H. Allen, J. L. Record, R. P. Gillette, Joseph Garbett, E. Brozesinski, E. Leverton, J. R. Ware, George L. Gary, E. F. Woodcock and E. A. Merrill, followed by a general discussion of the subject presented.

For other Proposal Advertisements see pages 51, 52, 53, 54, 56, of Advertisements and Construction News page 12.

BRIDGES.

Department of Public Works.
Bureau of Surveys.
Office 412 City Hall.
Philadelphia, Jan. 4, 1910.

Sealed proposals, endorsed "Bids for Bridges," and addressed to the undersigned, at the office above mentioned, will be received until 12 o'clock noon on Tuesday, Jan. 18, 1910, for Schedule A. Bridges.

Location—Wissahickon Avenue over Richmond Branch of Philadelphia and Reading Railway. Superstructure only. Steel beam and grider bridge encased in concrete. 58 feet span, 60 feet wide. Thirty-eighth Ward.

Branch Sewer in Tenth Street and Chelten Avenue, adjacent to bridge on line of Chelten Avenue under North Penn Railroad. 3 feet 6 inches circular brick sewer with inlets and connections. Forty-second Ward.

Plans for the above work will be exhibited in the office of the Bureau of Surveys, Philadelphia.

Specifications and blank forms upon which bids must be made, will be furnished upon application to the Chief Engineer, Room 416 City Hall.

Bidders must be skilled and regularly engaged in the class of work bid for.

No bid will be considered unless accompanied by a certificate from the City Solicitor that the provisions of an ordinance requiring proposal bonds when the bids exceed in amount five hundred dollars, approved May 25, 1860 (p. 81, West), have been complied with.

The Director reserves to himself the right to reject any or all bids, as he may deem best for the interests of the city.

GEO. R. STEARNS,
Director.

CONSTRUCTION.—Fort Hancock, N. J., December 16, 1909.—Sealed proposals for construction, plumbing, heating, electric wiring and fixtures of 1 double set N. C. O. quarters (stucco), 1 double set Firemen's quarters (brick), 1 fire station (brick), and construction of second story (brick), to Quartermaster's storehouse at Fort Hancock, N. J., will be received here until 12 m., January 15, 1910, and then opened. Information furnished on application. Plans of the buildings can be seen at the Office of Chief Quartermaster, Dept. of the East, Governor's Island, N. Y. City, or at this office. U. S. reserves right to reject any or all proposals. Envelopes containing proposals should be indorsed "Proposals for Construction," addressed C. J. GOODIER, Constructing Quartermaster.

Situations Wanted

Mechanical and Electrical Engineers.

POSITION in New York City wanted by mechanical and electrical engineer with fifteen years' experience covering design, construction of machinery and buildings, shop, office systems, tests, reports, etc.; graduate Massachusetts Institute Technology, now employed. Address "F. A. 26," Engineering News, New York. 1-1t

ONLY RESPONSIBLE POSITION—M. E. (27), graduated leading European university, extraordinary training in fabrication, designing, estimating, water turbines, dredges, governors, electrical apparatus. French, German, English; good Spanish. Address "A. B. 1," Engineering News, New York. 1-1t

ASSISTANT PROFESSOR in Mechanical Engineering in small college, five years' teaching experience, wants better position. Some experience erecting machinery, railroad maintenance, reinforced concrete. Address "D. B. 1," Engineering News, New York. 1-12t

Civil Engineers.

CONSTRUCTION or managing engineer, C. E. graduate (33), position with contractor, construction-operating company or railroad; nine years' experience on railroad, municipal and general contract work as estimator and contractor's engineer; also experienced in reinforced concrete construction, including factories, etc.; references. Address "R. A. 1," Engineering News, New York. 1-2t

CIVIL ENGINEER, 35, graduate, 11 years' experience, real estate developments, railroad construction, surveys, roads, pavings, sewers, pile trestles, seawalls, concrete, masonry; draftsman, computer; have instruments. Address "X. A. 1," Engineering News, New York. 1-12t

Bridge and Structural Engineers.

YOUNG ENGINEER, technical graduate, experienced in ordering material and detailing roofs and bridges, desires to change position. Now employed in high-class bridge work. Address "Z. A. 1," Engineering News, New York. 1-1t

Surveyors.

SURVEYOR—Transitman (22), coll... 3¼ years' experience field and ... mine, municipal and land surve... dress "H. 20," Engineering N... York. 1-2t

Superintendents, Misc., etc.

STEVENS GRADUATE, 10 years' ... neering experience; now employed ... Engineer; desires position in ... or Purchasing Dept., New York C... vicinity. Best references. Address "S. A. 1," Engineering News, New York. 1-12t

YOUNG MAN, 25, technical edu... 3 years' experience, engineering ... as stenographer, bookkeeper and offi... manager, desires position as secretary or office man. Address "S. A. 1," Engineering News, New York. 1-1t

TECHNICAL GRADUATE, 25, experienced 1 year general drafting, 1 year instrumentman, desires position; salary moderate; locality immaterial. Address "W. A. 1," Engineering News, New York. 1-1t

DREDGING LINE EXPERT, graduate M. E. 5 years university, 4 years with leading companies as mechanic, draftsman, technical correspondent, assistant chief manager. Coming from Panama now; 4 languages; position in sales department or manager's office. Address "B. B. 1," Engineering News, New York. 1-1t

CONTRACTOR'S SUPERINTENDENT, technical graduate, five years' experience in compressed air tunnels and caissons and heavy sewer and foundation work in water bearing ground. Can do drafting and estimating. Just released by completion of contract. N. Y. Interview. Address "C. B. 1," Engineering News, New York. 1-2t

YOUNG MAN, 25, six years' experience in all kinds building construction, wishes a position as assistant superintendent with builder or as inspector with architect or owner. Have assisted laying out work and supervising work of sub-contractors. Address "E. B. 1," Engineering News, New York. 1-1t

Situations Open

WANTED—Draftsmen and designers on bridge and structural steel work. Only men with several years' experience on details and design need apply. Technical graduate preferred. Applicants should furnish sample of drafting. C. P. MARSH, Bridge Engineer, N. Y. C. & H. R. R. Co., Room 1221, 335 Madison Ave., New York City. 1-1t

WANTED—First-class building superintendent; must have had recent experience in high-class buildings in Manhattan and furnish best of references. None but first-class men need apply. Address "F. B. 1," Engineering News, New York 1-1t

WANTED—Salesmen calling on power plant trade to handle small line of steam specialties for everyday use, by established manufacturing concern with reputation for high-grade material. Liberal commissions to energetic, reliable men. Address W. T. JAMESON, 100 Surrey Rd., Mansfield, Ohio. 1-2t

MECHANICAL DRAFTSMEN WANTED—Several first-class draftsmen experienced in hydraulic turbines. Permanent position for competent men. Location: Southeastern Pennsylvania. State experience and salary expected. Address "G. B. 1," Engineering News, New York 1-1t

Miscellaneous Wants

TWO STRUCTURAL steel and reinforced concrete designers and detailers, New York City; desire work for spare time. Address "W. 1," Engineering News, New York. 1-1t

WANTED—One or two partners to assist in a substantial financial way in promoting a new concrete roadway company, patents pending. Responsible principals only. Address "A. A. 1," Engineering News, New York. 1-1t

ESTABLISHED STRUCTURAL STEEL firm centrally located in New York City wishes to represent structural steel shop locally. Prepared to furnish bids, designs and shop details. Address "O. A. 1," Engineering News, New York. 1-1t

WANTED—Manufacturers' agencies for standard high-class machinery or materials, by a civil and mining engineer. Member Am. Soc. C. E. More than twenty years active practice. Familiar with requirements of Birmingham district. Extended acquaintance among operators. Good hustler; satisfactory references furnished; correspondence solicited. Address "ENGINEER," Room 850, Brown-Marx Building, Birmingham, Ala. 1-2t

CONSTRUCTION NEWS

Supplement to ENGINEERING NEWS. New York, January 13, 1910.

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RAILWAYS.

(denotes that this work is advertised in Engineering News.)*

ALBERTA & GREAT WATERWAYS.—J. A. L. Waddell, Ch. Engr., states that bids will be called for immediately for the construction of at least 100 miles of this line, which will run northeasterly from Edmonton, Alta., to Fort McMurray. W. R. Clarke, Kansas City, Mo., is the promotor and president. Noted on Dec. 30.

BOSTON & MAINE.—Improvements are planned which call for much heavy construction. The abolition of grade crossings, a new station and the enlargement of the tunnel under Washington St., in Salem, Mass., will require $2,000,000, while the double tracking of the Gloucester branch from Squam River to the Gloucester station, a new bridge at the river and the abolition of the grade at Washington St. will cost $250,000 more. A bad curve between Newmarket and Madbury, N. H., will be cut out and new stations at Keene, Charlemont and Shelburne Falls, N. H., are other improvements to come, according to L. Tuttle, Pres. of the B. & M. R. R. Co.

BUFFALO, ROCHESTER & PITTSBURG.—The MILLER CONSTRUCTION CO., Lock Haven, Pa., has been awarded a contract, it is announced, for work on nine miles of double-track, including grade and line revision, between Newton, Pa., and Mount Jewett. The work will be very heavy and is to cost about $800,000. These improvements will eliminate the last link of single-track on the main line between Ashford, N. Y., and Punxsutawney, Pa.

CANADA.—F. Higgins, attorney, Victoria, B. C., is seeking a charter to build a railway on Graham Island, B. C.

D. S. Tait, Victoria, B. C., is applying for a charter for a syndicate to build a line from a point on the Grand Trunk Pacific near Eagle Lake, via the watershed of the Willow River, to a point on the Cariboo Road near Barkerville, B. C.

Barnard & Robertson, attorneys, Victoria, B. C., are applying for a charter for a railroad to run from a point on the boundary between Alaska and British Columbia where the Salmon River crosses southeasterly to Barkerville, on the Grand Trunk Pacific.

CANADIAN PACIFIC.—Press dispatches state that the company has decided to award contracts this spring for the construction of 50 miles of the Kootenay Central.

Contract has been awarded to W. P. TIERNEY & CO., Nelson, B. C., for a 15-mile spur from Hartford Junction, B. C., to the Wellington camp.

CENTRAL ONTARIO.—It is expected that construction will be resumed on the extension from Lake St. Peter, Ont., to Whitney, 17 miles. J. D. Evans, Ch. Engr., Trenton, Ont.

EL PASO & FORT HANCOCK.—Capital is being secured by this company which proposes to build from El Paso to Ysleta, Tex., ten miles. The capital stock is $100,000, of which $55,000 are subscribed. C. N. Bassett is Pres.; Felix Martinez, Vice-Pres.; Thomas O'Keefe, Secy.; Winchester Cooley, Treas., all at El Paso, Tex.

GULF, COLORADO & SANTA FE.—Company has authorized the expenditure of $117,000 for improvements on the San Angelo branch which include the widening of roadbed between Temple and Brownwood, Tex., and revision of grade. There is also an appropriation of $240,000 for ballasting this branch with rock, 52½ miles, between the same points. F. Merritt, Galveston, Tex., is Ch. Engr. Noted on Oct. 7, 1909.

IDAHO & WESTERN.—The Idaho & Western Railway Co., a subsidiary company of the Chicago, Milwaukee & Puget Sound Ry. Co., has been incorporated in Idaho with a capital stock of $3,000,000 to build a branch from Plummer, Idaho, to Spokane, 75 miles, by way of Coeur d'Alene, Idaho, where company's headquarters will be located. Surveys are practically completed. E. J. Pearson is Ch. Engr. of Lines West of Butte, C., M. & P. S. Ry., at Seattle, Wash.

INDIAN CREEK VALLEY RY.—We are officially informed that this company is building the extension from Rogers Mills to Jones Mills, Pa., ten miles, with its own forces and no contract will be let. Chas. F. Hood is Pres., Connellsville, Pa.

KEWEENAW CENTRAL.—We are officially advised that company probably will let contracts this spring for building an extension twelve miles long from Mandan, Keweenaw County, Mich., to Fish Cove Bay. Preliminary survey is made and right-of-way secured. Capital is not yet obtained. The work will be heavy construction. Chas. A. Wright is Pres., and F. E. Simar, Ch. Engr., Hancock, Mich.

LONG ISLAND R. R.—Ralph Peters, Pres., in a recent statement concerning the operation of Long Island trains through the East River tunnels into the Pennsylvania R. R. station at 33d St. and Seventh Ave., New York, announced that "in addition to the many millions the Pennsylvania Railroad has spent and is spending for the four tunnels under the East River, and the vast station and terminal in Manhattan which all Long Island will benefit by, the Long Island Railroad is increasing its own facilities in all directions to take care of the large traffice now here and the larger traffic which will come upon the completion of the tunnels, etc., as follows: A four and six-track high-speed electric line to Jamaica; an elevated freight line between the freight yards and the Montauk Division at Long Island City so that no freight business will be handled on the same tracks with the passenger business; a double-track connection between the main line and the Montauk Division, so that the Rockaway branch from Woodhaven Junction and Glendale Junction will be brought into the tunnels; the double-tracking and electrification of the lines to Port Washington and Whitestone; the extension of the electric system to Long Beach, Oyster Bay, Farmingdale, Babylon, and the Wading River Branch; the building of additional running tracks, freight delivery yards, new stations, etc.; the purchase of new steel cars (150 now under construction); new sub-stations, machinery, etc., for electric system; the building of a large terminal, general office building, etc., at Jamaica, and the elimination of grade crossings at Van Wyck Ave., Rockaway Road, and Division St., and a new street under the tracks where the new station will be at Guilford St. and Carlton Ave. It is hoped that the City of New York will co-operate with the railroad in the elimination of all grade crossings in Queens. This is a matter of vital interest to the borough, and it is believed that the city government appreciates it and will co-operate to the fullest extent. Without such co-operation the borough will be handicapped and held back for years."

"All of the above," Mr. Peters states, "will represent an expenditure on the part of the Long Island Railroad of more than $30,000,000. The tunnels will be in operation by the summer of 1910." Noted on Nov. 18.

MANUFACTURERS' RY. (St. Louis).—Company plans a new line into St. Louis, Mo., to supplement the present Manufacturers' belt railway around East St. Louis, Ill., and South St. Louis. G. F. Moore is Pres. and Gen. Mgr., South Side Bank Bldg., St. Louis, Mo.

MIDDLE TENNESSEE R. R.—An extension will be built from Mount Pleasant to Water Valley (Columbia post-office), Tenn., 20 miles. R. G. Sparrow, Columbia, Tenn., is Mgr.

MOUNT HOOD R. R.—W. H. Eccles, Pres., Hood River, Ore., announces that a 75-mile extension is contemplated, which will connect with the O. R. & N. line. The Mount Hood R. R. Co. now operates 17 miles of line. Jos. W. West is Ch. Engr., Hood River, Ore.

OREGON R. R. & NAV. CO.—An expenditure of $1,020,000 for straightening the line between Yoakum and Pendleton, 12½ miles, has been authorized. The horseshoe curve will be eliminated by the construction of a tunnel through solid rock, 1,100 ft. long, it is reported. G. W. Boschke is Ch. Engr., Portland.

OTTAWA, RIDEAU VALLEY & BROCKVILLE.—Application will be made to the Dominion Parliament for incorporation to build this railway from Ottawa, Ont., south to Brockville, 60 miles. Also for authority to operate a ferry service across the St. Lawrence River from Brockville to Morristown, N. Y. The plans include an extension from Ottawa north to High Falls, Que. D. H. McLean, Ottawa, is Solicitor.

PHILADELPHIA & READING.—Contract has been awarded to C. F. KING & CO., Land Title Bldg., Philadelphia, for grading and doing masonry work, upon which a fourth track will be laid between Perkiomen Junction and Phoenixville, Pa., a distance of 1½ miles.

RALEIGH & SOUTHPORT.—Company will soon build an extension from Fayetteville, N. C., to Hope Mills, seven miles. This railway is in operation between Raleigh and Fayetteville, 84 miles. J. A. Mills is Pres. and Gen. Mgr., Raleigh, N. C. Noted on Nov. 18.

ROGUE RIVER VALLEY RY.—A bond issue of $125,000 has been placed with the Merchants' Loan & Trust Co., Portland, to provide for the construction of an extension between Jacksonville and Ruch, nine miles. W. H. Barnum is Vice-Pres., Jacksonville, Ore.

ST. LOUIS & SAN FRANCISCO.—According to press reports from Austin, Tex., B. F. Yoakum, Chn. Executive Com., New York, has stated that "we have long had in view the extension of the 'Frisco from Brady, Tex., to San Antonio. At present the plans are no more definite than they have been for several years past. The tendency at present is to build roads too cheaply. A poor road cannot pay. The 'Frisco will build no more roads until it is in a position to build one right."

ST. LOUIS, BARTLESVILLE & PACIFIC.—We are officially advised that negotiations are in progress for commencing construction of this railway. Surveys are made and right-of-way partly obtained. F. M. Overlees is Pres., Bartlesville, Okla. This railway will extend from Joplin, Mo., to Carmen, Okla., 225 miles. D. H. Rhodes is Ch. Engr., 213 W. Fourth St., Joplin.

ST. LOUIS, BROWNSVILLE & MEXICO.—The directors of the St. Louis, Brownsville & Mexico R. R. Co. issued a notice for a special meeting of the stockholders to be held at Kingsville, Tex., March 10, 1910, to authorize borrowing $25,000,000. This money will be used to extend the road from Brownsville, down to the Gulf Coast of Mexico to Tampico, and thence to the City of Mexico, 300 miles; from Sam Fordyce up the valley of the Rio Grande to Laredo, 125 miles, and from Kingsville to San Antonio, 160 miles. The St. Louis, Brownsville & Mexico R. R. was recently acquired by the Frisco R. R. interests.

SOUTHWESTERN RY.—Contract has been awarded to the GRIGSBY CONSTRUCTION CO., of Houston, Tex., for building the Scotland-Archer City extension, ten miles. Noted on Dec. 16.

WEBBERS FALLS, SHAWNEE & WESTERN.—Incorporated in Oklahoma with $100,000 capital stock to build a line 105 miles long from Webbers Falls, Okla., southwest to Warner and then through McIntosh, Okmulgee, Okfuskee, Lincoln and Pottawatomie Counties, to Shawnee. The estimated cost is $9,000 per mile. The Directors are A. R. Peyinghaus, of Muskogee, Gen. Mgr.; J. F. Sparrow and J. B. Crouch, of Porum, Okla.; O. L. Hayes, of Webbers Falls, and Campbell Russell, of Warner, Okla. The road as projected will go through the towns of Webbers Falls, Warner, Checotah, Weleetka or Dustin, Wetumpka and Shawnee and possibly Okeemah. J. H. Crouch, Attorney for the company, states that the survey from Checotah to Shawnee has been completed and that the survey west of there will begin at once. The intention of the promoters is to extend ultimately from Shawnee to Purcell, Lindsay and Lawton.

ELECTRIC RAILWAYS.

NEW YORK, N. Y.—The Public Service Commission, First District, has announced that it would make every effort to improve transit facilities between Williamsburg, Long Island City and the upper East Side of Manhattan Borough, New York, according to the Brooklyn "Eagle." After a careful investigation members of the commission have discovered that the co-operation of the federal government will be necessary, but when conditions are explained to the Washington authorities it is not believed that assistance will be refused. Action in the matter, it is promised, will be taken at once.

The Manhattan Bridge Three-Cent R. R. Co., noted last week, has elected the following officers: Frederick W. Rowe, Eastern Parkway, Brooklyn, Pres.; John C. Brackenridge, 95 Liberty St., New York, Vice-Pres.; Walter Hammitt, 1229 Pacific St., Brooklyn, Secy.; Edward T. Horwill, 215 Montague St., Brooklyn, Treas.

RENOVO, PA.—We are officially advised that a charter has been issued in Pennsylvania to the Renovo & Gleasonton St. Ry. Co., to construct and operate a trolley line five miles long in Clinton County, Pa. The capital of the company is to be $30,000. The officers are: Pres., E. W. Hess, of Clearfield, Pa.; Directors, R. V. Rogers and W. B. Reilly, of Renovo; J. H. Crissman, of Dubois, and I. W. Gleason, of Gleasonton.

FRANKLIN, PA.—The project to secure either a steam railroad or a trolley line from Franklin to Ellwood City has been revived and the Right-of-Way Committee appointed at the citizens' meeting last fall has chosen Emory C. Read right-of-way agent. It was stated at a recent meeting that a company was ready to finance the proposition and Mr. Read was instructed to go to work at once and get the right-of-way. Mr. Read is empowered to engage such persons to assist him as he sees fit. He will take the right-of-way as trustee and turn them over to a committee of which F. W. Officer, of the First National Bank, is chairman. This committee will hold the right-of-way until a company takes it over. It is expected that three or four months will be required to get the right-of-way.

RICHMOND, VA.—W. C. Whitney, Engr., of Fredericksburg, Va., is making a survey for the proposed extension of the Ashland, Richmond & Chesapeake Bay Ry., from Ashland, Va., via Fredericksburg and Alexandria, Va., to Washington, D. C., 115 miles. A branch line from Ashland to the Potomac River, about 80 miles in length, may be constructed. Guy Phillips is Secy. and Treas., 195 Broadway, New York. Wm. Northrop is Gen. Mgr., Richmond.

MORGANTOWN, W. VA.—The Morgantown & Dunkard Valley R. R. Co. plans to build an extension from Randall to Blacksville, W. Va., 17 miles. J. A. Martin, Morgantown, is Gen. Mgr. and Ch. Engr.

TALLULAH FALLS, GA.—Louis B. Magid, Pres. of the Piedmont Power Co., Candler Bldg., Atlanta, Ga., denies the press report that he is interested in a proposed electric street railway at Tallulah Falls. Noted on Dec. 30.

BRIDGEPORT, ALA.—The Bridgeport Electric & Railway Co. has been organized to build a 5½-mile street railway in Bridgeport. A 250-HP. plant will be built. W. D. Scarbrough is Pres.; L. W. Rorer, Vice-Pres.; A. L. Atwood, Secy.; J. P. Scarbrough, Treas. and Mgr., all of Bridgeport. Noted last week.

MEMPHIS, TENN.—Bids were received by the Lakeview Traction Co. on Jan. 5 for track laying on 12 miles of railroad from Memphis to Lakeview, Miss.; also for 1,025 lin. ft. of pile trestle work. W. W. Hayden, Ch. Engr., Memphis, informs us that contract for this work was awarded to C. C. TATE, Bogalusa, La. Construction is to begin on Feb. 15. Noted on Dec. 30.

SCOTTSBURG, IND.—J. E. Greeley, Louisville, Ky., Pres. of the Cincinnati, Madison & Western Ry. Co., is reported to have stated that actual construction on this new line will begin not later than April. The new line will run from Scottsburg to Madison, connecting with the line of the Indianapolis & Louisville Traction Co. at this place for Louisville and Indianapolis. Later, extensions to French Lick and Salem are proposed. Subsidies of over $100,000 were voted the road last fall and late in the fall a preliminary survey was made over the proposed route. Noted on Oct. 28 and Nov. 11, 1909.

KALISPELL, MONT.—The Whitefish & Polson Elec. Ry. Co. has been incorporated, it is reported, to build an electric railway from Kalispell northward to Whitefish and southward, through Somers, to Polson, on the west shore of Flathead Lake. Headquarters, Kalispell. Capital stock, $200,000. Inporators: G. H. Adams, J. H. Stevens, Joseph Euge, D. Ledgerwood, O. P. Mosby and Peter Nilson, of Kalispell.

The Somer, Polson & Missoula Electric Ry. Co. has been incorporated for the purpose of building an electric railway between Kalispell and Polson, and eventually to make a connection with the Northern Pacific R. R. on the south; and with Whitefish and Columbia Falls on the north. Capital stock, $50,000. Incorporators: J. A. Coram, F. H. Nash, T. D. Long, E. R. Gay and A. L. Jacquit, all of Kalispell, and James A. Talbott, of Columbia Falls, Mont.

DALLAS, TEX.—Plans are in progress and surveys are being made for the East Texas Traction Co.'s line which will connect Dallas, Mesquite, Forney and Terrell, Tex., 35 miles. Schuyler B. Marshall, Gaston Bldg., is Pres.; E. W. Morton, Jr., Vice-Pres.; C. L. Wakefield, 262 Live Oak St., Secy.; W. H. Gaston, Treas., all of Dallas. Noted on Dec. 9.

MIAMI, OKLA.—The Oklahoma, Kansas & Missouri Interurban Ry. Co. will undertake the construction of 105 miles of new line during 1910, extending from Joplin, Mo., to Bartlesville. The railway will also touch Hattonville, Miami, Spring City, Peoria, Quapaw, Blue Jacket and Welch. Franklin M. Smith is Pres., Joplin, Mo. Noted fully on Oct. 28, 1909.

HOOD RIVER, ORE.—We are officially advised that preliminary surveys have been made for the Valley Elec. Ry. Co.'s proposed new line through Hood River Valley. Right-of-way is partly made. There will be two bridges. The railway will be 20 miles long. E. T. Folts is Pres., and H. B. Langille is Ch. Engr., Hood River. Noted on Jan. 7 and Aug. 12, 1909.

BAKER CITY, ORE.—The City Council has granted to the Baker Interuban Ry. Co. a six-months' extension of its franchise in which to begin work on its street railway in Baker City. Company also plans to build an interurban railway from Baker City to North Powder and Rock Creek. Anthony Mohr, Baker City, is Treas. and Pur. Agent. Noted on Aug. 5 and Sept. 9, 1909.

SAN FRANCISCO, CAL.—On Dec. 31, at a special election, the citizens voted to incur a bonded indebtedness of $2,020,000 for two municipal railway projects. The first proposition is to issue $1,900,000 of bonds to be used to construct a municipal street railway on Geary St., from Market St. to Point Lobos Ave.; Point Lobos Ave., from Geary St. to Cliff Ave.; Cliff Ave., from Point Lobos Ave. to a terminal near the ocean; on Tenth Ave., from Point Lobos Ave. to Golden Gate Park. The second proposition provides for the acquisition and completion of a street railway over and along Market St., from Geary St. to East St., and on East St. to the ferry building at the foot of Market St., for which $120,000 of bonds will be issued. Marsden Manson is City Engr. Noted on Oct. 28.

STOCKTON, CAL.—The Central California Traction Co. will spend nearly $1,000,000 in building and equipping its extension from Lodi to Sacramento, according to S. B. McLenegan, Gen. Mgr., 413 Weber Ave., Stockton. Construction is in progress.

The Stockton Terminal & Eastern R. R. Co. has started work on its line which is to connect Stockton, Linden, Waterloo, Bellota, and Jenny Lind, 28 miles. Estimated cost, $400,000. Right-of-way is secured. The officers and directors are as follows: M. J. Gardner, Pres.; F. J. Dietrich, Vice-Pres.; James A. Barr, Secy.; J. Egbert Adams, Mgr.; H. W. Newell, Consult Engr.; Robert F. Burns, Attorney; A. A. Grant, E. F. Davis, M. J. Congdon. Headquarters are at Stockton.

OAKLAND, CAL.—The Oakland & Antioch Ry. Co. will commence construction soon on its proposed electric railway which is to extend from Oakland to Berkeley, Walnut Creek, Concord and Bay Point, 34 miles. Surveys and final locations have been made. Power to operate the line will be purchased. Capital stock, authorized, $3,500,000; issued, $500,000. Bonds, authorized, $2,000,000. Headquarters, 347 Grant Ave., San Francisco. H. A. Mitchell is Pres.; F. E. Brooks, Secy. Noted on March 4, Sept. 23, 1909, and Aug. 13, 1908.

NIAGARA FALLS, ONT.—The Niagara Falls, Welland & Dunnville Electric Ry. Co. has applied to the Ontario Legislature,

MISCELLANEOUS.

PAPER.—The prices of building and waterproofing papers have varied little during the month. Hydrex waterproofing felt is quoted at $1.25 per 100 sq. ft. in carload lots, New York City. Other quotations are as follows:

For 1-ply, which is sold by the net ton, $31. Other grades are sold by the roll of 108 sq. ft., 2-ply standard weighing 40 lbs., to the roll is 45 cts.; 2-ply extra heavy, weighing 45 lbs. to the roll, is 55 cts.; 3-ply standard, weighing 60 lbs. to the roll, is 65 cts., and 3-ply extra heavy, weighing 70 lbs. to the roll, is 75 cts.

Rosin-sized sheathing, 500 sq. ft. to the roll, is 38 cts. per roll for the light, weighing 25 lbs. to the roll; 45 cts. is named for medium weight, 30 lbs. to the roll, and 60 cts. for the heavy, weighing 40 lbs. to the roll.

Deafening felt 6 and 9 lbs. to the sq. ft., is $40 per net ton. Red rope roofing is $1.75 per roll of 250 sq. ft.

ROOFING SLATE.—The demand is better and prices are very firm. No slate is being quarried now and, in some parts of the country, construction is going forward rapidly. Stocks are not large and prices might work higher. The following quotations are for carload lots, f. o. b. quarry:

	Per 100 sq. ft.
Vermont, sea green	$4.00 to $4.50
Pennsylvania, ribbon	4.25 to 4.75
Maine, Brownsville	5.50 to 6.00
Red	10.00 to 12.00
Unfading green	4.50 to 5.50

ROPE.—The market for rope is not as strong as a month ago. Pure Manila of the highest grade is quoted at 8 to 8½ cts., second grade at 7½ cts. and the less desirable qualities at 7¼ cts. per lb. Pure sisal commands 7½ to 8 cts., second grade 6 cts. per lb. Jute rope, ¼ in. and larger is 5 to 5½ cts. per lb.

PITCH.—For the best quality of roofing and waterproofing pitch, $14 to $15 per net ton is asked delivered in New York.

ROOFING CEMENT.—Texaco roofing cement is sold at $25 a ton, in carload lots, f. o. b. cars New York City.

OAKUM.—Prices are a little easier than a month ago and in 50-lb. bales, the best grade of oakum can now be had at 6¼ to 6¾ cts. United States Navy is held at 5¾ to 6 cts., while plumbers' can be had at 2½ to 3 cts. per lb.

WATERPROOFING.—The following prices are named for carload lots of waterproofing compounds, f. o. b. cars New York. Hydrex waterproof felt, $1.25 per 100 sq. ft. Hydrex compound "A," 26 cts. per gal. Hydrex compound "B," 18 cts. per gal.

Texaco waterproofing cement is $30 per ton, in car lots, f. o. b. cars New York or Philadelphia.

RUBBER.—The rubber market fluctuates with unusual rapidity but the manufacturers of rubber products used in engineering in most cases protect themselves and, in consequence, the price of hose, both fire and air brake, moves but little. The same is true of rubber belting. The market during 1909, however, was unusually erratic, as for example, fine para which was sold at $1.20 in January, 1909, advanced to $2.16 in October and is now approximately $1.80. This grade of rubber is perhaps the most important of any as it is used everywhere where high pressures are required. The best automobile tires, inner tubes, are made of almost all para.

The Ceylon rubbers which are much used for mixing command nearly as high a price as para, but now they are a little higher, being quoted at $2.40. Early last year, however, they could be readily had at $1.23. Cheaper varieties of rubber such as Caucho is 60 to 70 cts.; Guayule, 85 to 90 cts.; coarse Para 80 to 90 cts.

The importation into the United States during the year 1909 will exceed, in value, any other year. In the first ten months it amounted to $73,000,000. Brazil, one of the cheap contributors of the India rubber supply to the United States, is sending us approximately 35% of our total importation. The rubber industry has changed materially in the last decade, formerly it was gathered from a forest and no attempts were made at cultivation. In recent years large plantations have been developed particularly in the East and these estates, as the plantations are called, produce anywhere from 200,000 to 500,000 pounds annually.

Numerous attempts have been made to produce rubber in Mexico and Central America, but they have been principally stock jobbing schemes because of the economic conditions. The climate is favorable and the soil is good enough to grow the best kind of rubber trees, but laborers on the Western Hemisphere will not work for the meager pittance that the Singhalese peasants will and until such conditions change it is doubtful whether these plantations will be a success as far as rubber production is concerned. With the advance in crude rubber, old rubber has likewise trended upward and scrap rubber now commands anywhere from 50% to 100% more than it did a year ago.

EXPLOSIVES.—The price of explosives varies according to the locality. They are, almost invariably, sold delivered either at the work or the nearest railroad station. The freight rates are exceptionally high on explosives and consequently much irregularity in quotations is apparent. There are, however, at least eight factories of the leading manufacture located in various parts of the country and consequently the haul is not over 800 miles in any company's domin. Dynamite, of the kind usually used by contractors, is approximately 11 to 13 cts. per lb. f. o. b. factory in ton lots. Blasting powder, classified as "soda" grade, is sold at $1.20 to $1.40 per keg or 25 lbs. in lots of 10,000 lbs. The following prices prevail on Trojan in car load lots, minimum 24,000 lbs., f. o. b. Pacific Coast points: No. 1, 13½ cts.; No. 2, 10½ cts.; No. 3, 10 cts. They have a disruptive force equivalent to 60%, 40% and 30% of nitro-glycerine.

VAULT LIGHTS.—Lenses for concrete vault light work are sold by the piece and are usually made from the mold of the contractor. The price varies according to the weight, but they can be had at 4 to 5 cts. per lb. A "bulls eye" 3 ins. in diameter and 3 ins. thick weighs about 12 oz. and is sold at 8 cts., in large lots.

CARS AND LOCOMOTIVES.—The building of railroad rolling stock last year showed little, if any, improvement over 1908, which was also very poor. The "Railroad Age-Gazette" computes that the number of freight and passenger cars built in the United States and Canada in 1909 was 96,419. In 1907 it was 289,695. The locomotives built last year were 2,887 and in 1907, the boom year, 7,362.

The outlook for business this year is good, as many of the car builders have their order books well filled.

LIGHTERAGE LIMITS.—The free delivery of "Lighterage Limits" in New York City are as follows: In Manhattan, from a point opposite the Fort Lee ferry south along the Hudson River around the Battery and north along the East and Harlem rivers to the Jerome Ave. bridge at 155th St. In New Jersey, south from Fort Lee ferry to Bayone City; points on the north and east shore of Staten Island between Bridge Creek (Arlington) and Clifton, both inclusive, and including Elm Park, Eristina and Shooters Island. In Brooklyn, from 69th St., Bay Ridge, north to Pot Cove, Astoria, Long Island City.

INDUSTRIAL NOTES.

THE MILLARD CONSTRUCTION CO. announces its corporate title changed to Keystone State Construction Co. The company will retain its present offices at 704-709 Pennsylvania Bldg., Philadelphia, Pa.

THE HAROLD L. BOND CO., formerly of 140 Pearl St., Boston, Mass., dealer in contractors' railroad and mill supplies, states that owing to increase of business larger quarters have been taken at 383 Atlantic Ave.

THE CONTRACT for placing concrete piles in the foundations of the People's National Bank Building at Charleston, S. C., has been awarded to the Raymond Concrete Pile Co., of New York and Chicago. Thompson & Frohling, New York, Archs. Hedden Construction Co., Gen. Contractors.

IT IS REPORTED that one of the largest sewer pipe plants in the world will be built at Cleveland, Ohio by a company of capitalists headed by Mr. H. A. Robinson of Akron, at an approximate cost of $750,000. The plant when completed will employ about 700 men.

THE GENERAL FIREPROOFING CO., of Youngstown, Ohio, state that owing to their increased foreign trade, they have found it necessary to open an export office at 396-398 Broadway, New York. Mr. A. D. Level, formerly with the U. S. Steel Products Co., will handle all export business through this office.

HENRY A. HITNER'S SONS CO., of Huntington and Aramingo Sts., Philadelphia, Pa., announce the discontinuance of their New York office, 90 West St., also of their branch office, Pennsylvania Bldg., Philadelphia. Their representative, Mr. Wm. B. Ilko, is now located at the main office from which all future business will be transacted.

ACCORDING TO PRESS REPORTS, the Baldwin Locomotive Works of Philadelphia, Pa., for the year ending Dec. 31, 1909, turned out 1,013 locomotives, at an approximate total value of $13,000,000. This is a large increase over 1908, when only 617 locomotives were built, but below 1907 output, when 2,663 locomotives were built by that company.

THE RAYMOND CONCRETE PILE CO., of New York and Chicago has been awarded the contract for the complete foundations, including excavation, concrete piling, concrete footings, curbs, etc., of the warehouse building for E. S. Shepherd, which will be occupied by the Crerar-Adams Co., of Chicago. Ottenheimer, Stern & Reichert, Chicago, Archs.

MR. A. M. CRAIN, Assoc. Member Am. Soc. C. E., has opened an office for an engineering and contracting business in the Brandeis Bldg., Omaha, Neb. Mr. Crain has been connected with the construction of the Detroit River tunnel as Division Engineer for the Detroit River Tunnel Co. and General Superintendent for the Butler Bros. Construction Co. for the last three years.

THE MAIN OFFICES and wareerooms of the Lynchburg Foundry Co., at Lynchburg, Va., were destroyed by fire on the morning of Jan. 1, entailing a loss of about $35,000, which was fully covered by insurance. This company owns and operates the McWane Pipe Works at Lynchburg and the Radford Pipe Works at Radford, Va., and we are advised that the manufacture of pipe will be continued without interruption on account of the fire.

THE NORTHERN EQUIPMENT CO., of Chicago, which recently absorbed the American Boiler Economy Co., reports on account of the increase in the sales of the Copes boiler feed regulator and the Copes pump governor, they have been compelled to move to a larger factory building. This company has given up the office in the Old Colony Building. The factory and main office is now located at 408-418 West Indiana St., Chicago, Ill.

THE MINNEAPOLIS STEEL & MACHINERY CO., of Minneapolis, reports the first yearly conferences of its District Representatives and Department Managers December 14, 15 and 16. Papers were read by G. L. Gillette, G. W. Pope, A. M. Burch, A. H. Allen, J. L. Record, R. P. Gillette, Joseph Garbett, E. Brozesinski, E. Leverton, J. R. Ware, George L. Gary, E. F. Woodcock and E. A. Merrill, followed by a general discussion of the subject presented.

For other Proposal Advertisements see pages 51, 52, 53, 54, 56, of Advertisements and Construction News page 12.

BRIDGES.

Department of Public Works.
Bureau of Surveys.
Office 412 City Hall.
Philadelphia, Jan. 4, 1910.

Sealed proposals, endorsed "Bids for Bridges," and addressed to the undersigned, at the office above mentioned, will be received until 12 o'clock noon on Tuesday, Jan. 18, 1910, for Schedule A. Bridges.

Location—Wissahickon Avenue over Richmond Branch of Philadelphia and Reading Railway. Superstructure only. Steel beam and grider bridge encased in concrete. 58 feet span, 60 feet wide. Thirty-eighth Ward.

Branch Sewer in Tenth Street and Chelten Avenue, adjacent to bridge on line of Chelten Avenue under North Penn Railroad. 3 feet 6 inches circular brick sewer with inlets and connections. Forty-second Ward.

Plans for the above work will be exhibited in the office of the Bureau of Surveys, Philadelphia.

Specifications and blank forms upon which bids must be made, will be furnished upon application to the Chief Engineer, Room 416 City Hall.

Bidders must be skilled and regularly engaged in the class of work bid for.

No bid will be considered unless accompanied by a certificate from the City Solicitor that the provisions of an ordinance requiring proposal bonds when the bids exceed in amount five hundred dollars, approved May 25, 1860 (p. 81, West), have been complied with.

The Director reserves to himself the right to reject any or all bids, as he may deem best for the interests of the city.

GEO. R. STEARNS,
Director.

CONSTRUCTION.—**Fort Hancock, N. J., December 16, 1909.—Sealed proposals for construction, plumbing, heating, electric wiring and fixtures of 1 double set N. C. O. quarters (stucco), 1 double set Firemen's quarters (brick), 1 fire station (brick), and construction of second story (brick), to Quartermaster's storehouse at Fort Hancock, N. J., will be received here until 12 m., January 15, 1910, and then opened. Information furnished on application. Plans of the buildings can be seen at the Office of Chief Quartermaster, Dept. of the East, Governor's Island, N. Y. City, or at this office. U. S. reserves right to reject any or all proposals. Envelopes containing proposals should be indorsed "Proposals for Construction," addressed C. J. GOODIER, Constructing Quartermaster.**

Situations Wanted

Mechanical and Electrical Engineers.

POSITION in New York City wanted by mechanical and electrical engineer with fifteen years' experience covering design, construction of machinery and buildings, shop, office systems, tests, reports, etc.; graduate Massachusetts Institute Technology, now employed. Address "F. A. 26," Engineering News, New York. 1-1t

ONLY RESPONSIBLE POSITION—M. E. (27), graduated leading European university, extraordinary training in fabrication, designing, estimating, water turbines, dredges, governors, electrical apparatus. French, German, English; good Spanish. Address "A. B. 1," Engineering News, New York. 1-1t

ASSISTANT PROFESSOR in Mechanical Engineering in small college, five years' teaching experience, wants better position. Some experience erecting machinery, railroad maintenance, reinforced concrete. Address "D. B. 1," Engineering News, New York. 1-12t

Civil Engineers.

CONSTRUCTION or managing engineer, C. E. graduate (33), position with contractor, construction-operating company or railroad; nine years' experience on railroad, municipal and general contract work as estimator and contractor's engineer; also experienced in reinforced concrete construction, including factories, etc.; references. Address "R. A. 1," Engineering News, New York. 1-2t

CIVIL ENGINEER, 35, graduate, 11 years' experience, real estate developments, railroad construction, surveys, roads, pavings, sewers, pile trestles, seawalls, concrete, masonry; draftsman, computer; have instruments. Address "X. A. 1," Engineering News, New York. 1-12t

Bridge and Structural Engineers.

YOUNG ENGINEER, technical graduate, experienced in ordering material and detailing roofs and bridges, wishes to change position. Now employed in high-class bridge work. Address "Z. A. 1," Engineering News, New York. 1-1t

Surveyors.

SURVEYOR—Transitman (22), college man, 3¼ years' experience field and office, in mine, municipal and land surveying. Address "H. 20," Engineering News, New York. 1-2t

Superintendents, Misc., etc.

STEVENS GRADUATE, 10 years' engineering experience; now employed as Sales Engineer; desires position in sales or Purchasing Dept., New York City vicinity. Best references. Address "S. A. 1," Engineering News, New York. 1-12t

YOUNG MAN, 25, technical education, 5 years' experience, engineering field as stenographer, bookkeeper and office manager, desires position as secretary or office man. Address "S. A. 1," Engineering News, New York. 1-1t

TECHNICAL GRADUATE, 25, experienced, 1 year general drafting, 1 year instrumentman, desires position; salary moderate; locality immaterial. Address "W. A. 1," Engineering News, New York. 1-1t

DREDGING LINE EXPERT, graduate M. E., 5 years university, 4 years with leading companies as mechanic, draftsman, technical correspondent, assistant chief manager. Coming from Panama now; 4 languages; position in sales department or manager's office. Address "B. B. 1," Engineering News, New York. 1-1t

CONTRACTOR'S SUPERINTENDENT, technical graduate, five years' experience in compressed air tunnels and caissons and heavy sewer and foundation work in water bearing ground. Can do drafting and estimating. Just released by completion of contract. N. Y. Interview. Address "C. B. 1," Engineering News, New York. 1-3t

YOUNG MAN, 25, six years' experience in all kinds building construction, wishes a position as assistant superintendent with builder or as inspector with architect or owner. Have assisted laying out work and supervising work of sub-contractors. Address "E. B. 1," Engineering News, New York. 1-1t

Situations Open

WANTED—Draftsmen and designers on bridge and structural steel work. Only men with several years' experience on details and design need apply. Technical graduate preferred. Applicants should furnish sample of drafting. C. P. MARSH, Bridge Engineer, N. Y. C. & H. R. R. Co., Room 1221, 335 Madison Ave., New York City. 1-1t

WANTED—First-class building superintendent; must have had recent experience in high-class buildings in Manhattan and furnish best of references. None but first-class men need apply. Address "F. B. 1," Engineering News, New York. 1-1t

WANTED—Salesmen calling on power plant trade to handle small line of steam specialties for everyday use, by established manufacturing concern with reputation for high-grade material. Liberal commissions to energetic, reliable men. Address W. T. JAMESON, 100 Surrey Rd., Mansfield, Ohio. 1-2t

MECHANICAL DRAFTSMEN WANTED—Several first-class draftsmen experienced in hydraulic turbines. Permanent position for competent men. Location: Southeastern Pennsylvania. State experience and salary expected. Address "G. B. 1," Engineering News, New York. 1-1t

Miscellaneous Wants

TWO STRUCTURAL steel and reinforced concrete designers and detailers, New York City; desire work for spare time. Address "W. 1," Engineering News, New York. 1-1t

WANTED—One or two partners to assist in a substantial financial way in promoting a new concrete roadway company, patents pending. Responsible principals only. Address "A. A. 1," Engineering News, New York. 1-1t

ESTABLISHED STRUCTURAL STEEL firm, centrally located in New York City, wishes to represent structural steel shop locally. Prepared to furnish bids, designs and shop details. Address "O. A. 1," Engineering News, New York. 1-1t

WANTED—Manufacturers' agencies for standard high-class machinery or materials, by a civil and mining engineer. Member Am. Soc. C. E. More than twenty years active practice. Familiar with requirements of Birmingham district. Extended acquaintance among operators. Good hustler; satisfactory references furnished; correspondence solicited. Address "ENGINEER," Room 850, Brown-Marx Building, Birmingham, Ala. 1-2t